

THE
MEDICAL RECORDER.

VOL. VIII.

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Nº. I.

ART. I. *An Account of a Case of Stricture of the Œsophagus, with a few concluding remarks.* By H. G. JAMESON, M. D. Surgeon to the Baltimore Hospital.

THE subject of this disease is a lady of refined mind and feeble delicate habit of body, aged upwards of 40 years. She has experienced much difficulty in swallowing solids for two years, but can still swallow liquids with tolerable facility. Her food must be chewed with much care, and even then it is only pulpy articles that can be managed with any sort of comfort—animal food can only be taken at times, and with great difficulty. There is no pain nor soreness in the part—nor is there any interruption in her breathing; but, at times, after eating, she feels a stinging unpleasant sensation just below the lobe of the left ear. She has been dyspeptic, and the affection of the throat ascribed by several respectable physicians to that disease, to imagination, &c.

The patient is not aware of the cause of the disease, but dates its commencement from an accidental choking in swallowing a piece of beef. From that time there has been more or less disability in swallowing, and she has been subject to occasional choking at table. The disease formed suddenly to considerable extent, but has been gradually increasing, and, at this time, she is seriously threatened with starvation. In examining the throat, by pressing with my thumb on the œsophagus just below the thyroid cartilage, I felt a sort of crepitus from wind; and I was informed, that the patient was greatly annoyed by a strange noise which proceeded from about the part upon which I pressed. I was convinced,

from this circumstance, that the œsophagus was somewhat dilated below the stricture, and afforded a lodgement for air which might occasionally rise up from the stomach.

I satisfied myself that there was no tumour in the course of the œsophagus. I passed in a common probang, but soon found that it could not be made to pass down as far as the sternum. I next tried a common flexible bougie, but could not pass it through the stricture. This examination was made on the 2d of December, 1823.

On the 3d of December, or day after the first examination, I repeated my trials to pass the stricture. The patient being now calm, and resolutely bent on having something done, I was enabled to make a more careful trial of the bougies, but could not pass the stricture with any thing of the sort. The use of the probang yesterday has produced some soreness of the throat, but it is very slight—some increase of the uneasiness about the ear, which prevented her from eating dinner.

4th day, tried a flexible tube, but could not succeed.

5th: tried the ball probe, No. 1.—Could not succeed.

6th: succeeded in passing the ball probe, No. 2, but not until long trials with both these instruments. The ball passed the stricture with a jerk, and I now satisfied myself that the stricture was confined to a small extent, and that there was no very remarkable induration, although the parts were obviously swollen. I find the stricture to exist at the termination of the pharynx.

7th: No soreness after the sounding yesterday, and she thinks the swallowing slightly improved. Enlarged the ball to-day by lapping a piece of buckskin about it, but could not succeed. I now perceived that there was a disposition in the œsophagus, at its commencement, to contract when the ball was passed down. A mucilage of gum-arabic was advised to be taken after these observations, with a view of allaying irritation.

8th: Tried the probes ineffectually—I again found the ball to be grasped by the tube at the termination of the sound part of the pharynx.

9th: Could not succeed, although long and repeated trials were made.

10th and 11th: Unsuccessful.

12th: I passed the small probe.

13th: I succeeded in introducing the probe No. 1, armed with a piece of dried cats' intestine. The plan was founded on the suggestion of Dr. Arnott, who proposes to cure stric-

tures of the urethra in this way. Having succeeded in passing a considerable part of the tube through the stricture, it was forcibly injected by means of a syringe connected to it, and filled with water. From this time to the 19th of the month, I passed the tube and filled it as often as I could, but did not succeed more than twice in getting the tube below the stricture. I soon found this plan wholly inefficient—no sooner was the tube well filled, than it came nimbly winding out of the mouth like an eel or serpent. This day I caused the patient to swallow two buck-shot strung upon a cord.

From this time to the second of February, the patient was given to swallow from two to four buck-shot, and, at times, a bullet of larger size, but in most trials the balls stopped at the stricture. I now discovered that as many as four buck-shot could be lodged in the bottom of the pharynx without the patients being aware of the circumstance.

Feb. 2. I commenced the use of the probe armed with the tube, and used quicksilver instead of water. The weight of this fluid enabled me to dilate the part in a very slight degree. From this time till the twentieth, I continued the use of the quicksilver, but had made so little progress that I was convinced I should never succeed in that way. I set my inventive powers again to work with increased ardour, and succeeded in contriving an instrument which answered my purpose. It may be necessary to state, that I used the quicksilver by filling the tube with it, and then playing the tube up and down a few times, by which it was made to pass with the pressure of from eight to twelve ounces through the stricture.

On the 22d, I used the sliding probang No. 1, by passing the probe through the stricture about two inches, then its outer end was slipped through the hole passing through the longest diameter of the probang, and having passed it (the probang) as far as the root of the tongue, the wire and probang were brought together and passed through the stricture. This was repeated for some time every second day—afterwards every day, and at each time the probang was made to pass three or four times through the stricture before withdrawing.

After using the probang three or four weeks, I could pass the ball probe with facility, whereas, before the use of this instrument, it was attended with much difficulty, and frequently (as I have already stated) could not be effected at all. No. 1, now moving freely through the stricture, and the

power of deglutition having considerably improved, I commenced the use of No. 2.

A few weeks were employed in the use of this second size. It was passed through the stricture with tolerable ease, but it was difficult to withdraw it. Some soreness arose from the strain produced in drawing out this instrument, and interfered in some measure with her swallowing. On one or two occasions a little blood appeared in the mucus, which was spit up. The soreness was not great at any time, and, although I was extremely cautious not to occasion any soreness of the part, I still persisted in the use of the probang, believing that an instrument so perfectly smooth as a well-polished ivory probang would rather sooth and heal the parts, as we find to be the case with well-polished sounds in stricture of the urethra.

No. 2, having been brought in the course of a few weeks to pass through with great ease, I began the use of No. 3. This instrument passed with facility, and produced no soreness, but could only be used with the aid of the ball probe. I now began to try, from time to time, to pass the probang without the guide—I could not succeed.

After using No. 3, until it moved in the strictured part easily, I commenced with No. 4. This passed down with facility, but its introduction caused some very painful and strange feelings in the thorax—this I attributed to the distention of nerves surrounding the œsophagus. No soreness remained. The day after beginning the use of this size, the swallowing was improved. But it was still obvious, that the stricture, being somewhat of a valvular structure, resumed its situation as soon as the probang was drawn out.

I have remarked in my note book, some weeks after using No. 4, that the patient swallows much better, but the stricture still closes after the instrument is withdrawn, so as to render it still somewhat difficult at times to introduce either of the ball probes—the difficulty is slight, however, in comparison with what it was some weeks ago. No. 5, was now passed—its introduction was very painful for a few times, in consequence of which I left longer intervals between the times of using the instrument, but never more than two or three days. From this time nothing remarkable presented itself in the case—the patient is quite comfortable in regard to swallowing, but, owing to my not being able to pass the probangs without the guide, she was desirous of continuing the dilatation. And indeed I was fully impressed with the necessity

of continuing to dilate for a length of time. The use of this instrument was continued once a-day, excepting Sundays, till about the middle of September, at which time I was taken down with a violent bilious fever, and could not attend to the case for nearly two months. I was greatly pleased to find that during this period no alteration for the worse had taken place. Being desirous at this time to ascertain whether any other stricture existed, I passed the probang as low, or perhaps a little lower, than the sternum—she instantly started forward as if much alarmed—at this moment she felt the most violent shock through the spine.

The case has now been a year wanting a few days under treatment, but we are to deduct two months of lost time. The probang will not yet pass without the guide, but they are introduced together with the greatest facility. The patient can partake with comfort of all sorts of diet, and swallows it with readiness. In short there is a complete removal of the stricture, but the termination of the pharynx, or rather the beginning of the œsophagus, has fallen somewhat backwards, and forms a sort of a valve, but when the muscles are brought into action this is lifted, and she is enabled to pass down the morsel, since there is neither thickening nor any traces whatever of induration. So that if she remains in her present situation, of which I believe there is little doubt, this once formidable affection will neither shorten her life, nor subject her to any material inconvenience, much less pain.

It seems necessary to remark, that I could never succeed in making the probang pass into the pharynx by sliding on the probang; but when it had reached the root of the tongue, the two instruments were taken together and so passed down. By this procedure the ball of the probe often passed into the stomach, since it often passed down seven or eight inches below the ivory. The wire was too limber, however, to do any injury, particularly as it had a ball on its end. The wire is of steel, and is therefore very flexible, and free from liability to sudden bends, to which iron wire is subject. The diameter should be about half a line—not much thicker than the wire used for strangulating polypi. It is essential that the whalebone of the probang be not too strong.

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WE have but little information of a practical nature on the subject of stricture of the œsophagus. Many cases of this sort have been found in the dissecting room (by Morgagni

and others), but as regards the curative means nothing very satisfactory has been laid before the profession. It is true, the French writers have paid some attention to the subject, and it has been proposed to overcome strictures of the œsophagus by the use of flexible tubes. These no doubt would often answer a good purpose; and, if early application of them was made, they would often remove the disease.

In the case now under notice, I do not believe they could have been brought to answer any good purpose. I could not succeed in passing them through the stricture, although somewhat accustomed to the introduction of tubes into the œsophagus. The stricture being at the commencement of the œsophagus mostly (that is, under the cricoid cartilage), the curvature of the stylet (by means of which the tube must be passed), if made to suit the curvature of the fauces and pharynx, will strike against the anterior part of the lower part of the pharynx, and will not, therefore, be likely to pass through a stricture. If we draw out the stylet after entering the tube fairly into the pharynx, it will be too flexible to pass through any considerable stricture—and hence it was that Boyer could not pass a flexible tube in a case which he treated, till he had passed down a silver catheter; there was a risk of producing an unpleasant wound with the sound. Besides, a tube sufficiently large to open the œsophagus to its natural size, will interrupt respiration to a much greater degree than an ivory probang. The tube, by pressing upon the root of the tongue and epiglottis, will greatly obstruct the trachea, but the probang having a small shaft or handle will only obstruct the trachea at one point, and, being guided by the wire through it and through the stricture, we can pass it through with much greater facility and rapidity. I would have the reader to observe, that no more than a moderate force should be applied, lest we occasion a soreness of the part, and to prevent this we should have the shaft of whalebone so small as to be very flexible.

The intention of the French surgeons seems to have been to introduce the tube and let the patient use it; at least, this has been mostly all that was aimed at. I am, however, decidedly of opinion, that, to say nothing of the inconvenience of wearing such a tube, it will never succeed so well as the guided probang. The tube to be worn must necessarily be small, of course you cannot thus dilate sufficiently to restore the œsophagus to its natural size; whereas, with the sliding probang, you can gradually enlarge till the œsophagus is sufficiently enlarged, and the rapidity with which you can pass

the probang in and out on a slide, will so little interfere with respiration, that but little inconvenience will be found to arise from its introduction.

Any explanation of the drawing seems unnecessary, as the application of them has been explained in the body of this report. It may be well to remark, that about fourteen inches is a proper length for the shaft or handle of the probangs and ball probes.

N. B. Be careful to observe, that the shaft of whalebone is fastened to the ivory, so as to do away all possible risk of its coming out, as you withdraw the probang—inattention to this circumstance might lead to disastrous consequences, as the patient would probably suffocate before you could extract the ivory deprived of its handle. Mine are secured by a screw on the whalebone fitting into a female-screw in the ivory, and, after screwing as tight as possible, a rivet is passed through so as to make all doubly secure.

ART. II. *A case of Luxation of the Shoulder Joint.* By
HORATIO G. JAMESON, M. D., Baltimore.

IN the year 1812, Mr. J. Kroft, near Baltimore, came to me on account of a luxation of the shoulder joint. The patient, was about 60, of a lean, delicate habit. The luxation was downwards, and, consecutively, the head of the bone was placed under the pectoral muscle. No use had been made of the arm; it hung almost lifeless at his side, and the head of the bone had become firmly attached to the parts with which it was in contact.

I believe no attempt had been made at reduction, and yet the luxation had existed twelve weeks. Upon a careful consideration of all the circumstances, I advised an attempt at reduction. I was then an admirer of Desault, in particular in affections of the bones, and believing, therefore, that I must impress free motions upon the limb, for the purpose of tearing up the attachments, and also for rending sufficiently the capsular ligament to admit freely the head of the bone, I told the patient, that if he would consent to some rough handling, I could probably reduce the bone. Anxious for relief, he willingly submitted.

I am not able, at this time, to state the precise plan pursued, but I recollect, most clearly, that after moving the arm freely and forcibly till all attachments were broken up, I very

readily succeeded in throwing the head of the humerus into the glenoid cavity, by confining the thorax by one assistant, while the other raised the arm out of the axilla by means of a towel, and it remained fairly and perfectly in the socket.

Although I am not able, at this distance of time, to give the manœuvres employed, not having kept notes of the case, still I have thought the case worth preserving, because it has been strongly asserted, that luxations of the humerus were irreducible after two months. I had no aid but that of two coloured men, then in my house.

It may be proper to remark here, that Mr. A. Cooper has satisfactorily proved, what indeed should seem *à priori* extremely probable, that in all luxations the capsular ligaments are so freely rent, that no obstacle to reduction can arise from this circumstance. So far then, I proceeded upon a wrong theory, but the pain which I gave the patient, considerable, indeed, was not the less necessary on that account, for it was by violent efforts only, that the attachments could be broken up. No unpleasant symptoms succeeded the reduction.

Case Second.

Joshua Harris, a seaman, aged about 25 years, on board the schooner Isaac M'Kim, captain Phillips, in the latitude of Bermuda, two days in the Gulph Stream, fell from the mast-head on deck, and luxated the shoulder downwards and backwards, on the 30th day of May, 1823. He remained at sea seventy-two days, without surgical aid, at the termination of that period attempts were made, at Rio Janiero, to reduce the luxation, by means of pulleys, &c.: all endeavours proved abortive. After his return to Baltimore, he was advised to apply for aid at the Baltimore Hospital. Having satisfied myself of the nature of the case, and seeing a fine looking, healthy young man, reduced to a state so truly deplorable and helpless, I advised an attempt at reduction. On the 18th of November, 1823, I succeeded in reducing this dislocation, that is, five months and nineteen days after the accident. The operation was witnessed by more than twenty physicians and medical students, some of whom afforded me their sanction and aid in the operation.

The following appearances were presented: The head of the humerus could be felt resting upon the dorsum scapulæ, near its lower angle; there was some enlargement about the head of the bone, and it presented some knobiness; it was firmly attached; motions of the limb very much limited; a thickening around the head of the bone, which led to the

conclusion that a tolerable socket had formed upon the scapula. The head of the bone being attached low down upon the scapula, and the muscles of the arm being attached to the processes at its upper end, and to the clavicle, gave a singular degree of deformity to the upper arm; a side view of the arm presented the shape of a flattened cone with its base upwards. The glenoid cavity seemed free from deformity, but the head of the bone having passed far downwards and backwards, necessarily drew the muscles over this cavity so firmly, that this part of the diagnosis was rendered somewhat doubtful. There was soreness upon handling, but no swelling or inflammation of the parts. The patient could raise his hand to his head, but his motions were very awkward and feeble. The arm stood off at a considerable angle with the body, and could not be brought down to his side.

In short a new joint had evidently formed, and the head of the humerus moved in its new socket without pain; but the head, and a considerable part of the bone, being removed out of a line imagined from the origin to the insertion of the muscles, connecting the humerus with the scapula, and the change of position of the head of the bone having the effect to relax the *latissimus dorsi* and *teres*, while the *pectoralis major* and *deltoid* were put upon the stretch, necessarily rendered the motions of the arm very imperfect.

Measures for reduction.—A strong band of girding, furnished with a soft cushion to lay in the axilla, (intended merely to prevent the risk of cutting the skin by the girding,) was passed under the affected arm, one end of the strap passing from the outside of the axilla over the upper part of the scapula, the other end from the inside of the axilla over the acromion process; they were thus made to meet on the upper part of the scapula, and were tied together with a small cord. The two ends put together were then tied to a strong piece of timber, placed across the outside of a window; this afforded efficient means of counter-extension. Pullies were connected to the arm above the elbow, by means of a long roller and a cord; this part of the apparatus was so arranged as to pull the arm downwards by means of a staple in the floor, through which the cord of the pullies was passed; to this cord was attached a crank, which had the effect of rendering the extension more equable.

The patient was now bled from a large orifice; when about three pints were drawn, he became very much relaxed and faint; extension was now gradually made, and continued some time; during the extension I applied my knee to the

posterior part of the upper end of the arm, so directed as to throw the head of the bone towards the glenoid cavity. After a reasonable continuance of the extension there was an audible snap, and the head of the bone was seen to move from the scapula; a second extension brought it about two inches from its attachment, also attended with some snapping sound. The bone had been brought about half way to the axilla. I now found that the extending force acted too much on a straight line with the counter-extending band, the body, the affected arm, and the extending band. These being all on the same line, prevented me from throwing the head of the bone into the axilla. I therefore changed the counter-extending band, passed the inner end of it over the breast and sound shoulder, the other end was made to meet it on the same shoulder, where they were tied together, that is, behind, on the sound shoulder, near the neck. The patient was then placed with his back to the pullies; by this contrivance the counter-extending and extending bands were thrown out of a straight line with the body and arm; this enabled me, by availing myself of the angle thus formed, to apply my knee, with great effect, in throwing the head of the bone into the axilla.

The description here given applies to a luxation downwards and backwards; the same contrivance may be made to answer equally well in cases of luxation downwards and forwards, or under the pectoral muscle. In that case it will only be necessary for us to place the patient with his face towards the pullies, and the operator to stand before the patient so as to enable him to place his knee in the axilla. The tendency which the extending forces will have to bring the axilla into the same straight line with the extending and counter-extending bands, will enable the operator to press the head of the bone towards the axilla with great effect. To this plan of procedure I believe it is that I owe my success in the case before me. Extension having been twice made, after the manœuvre, the head of the bone was brought fairly into the axilla.

I had now accomplished all that I intended by the pullies. The whole apparatus was, therefore, changed for such as I prefer in cases of simple luxation, or, indeed, in any luxation where no attachments have been formed. A silk handkerchief was now tied pretty tight around the arm as close up in the axilla as possible;* to this was fastened the ends of

* This method was invented by Drs. Cooke and Davidge.

the girding used in the first part of the operation for the counter-extension. The extension was made by applying a long towel to the wrist; the two ends of this were given to four medical gentlemen, on account of their better judgment in regard to the proper force, and with a view of having a well-regulated force kept up for a few minutes, with a view of fatiguing the muscles into relaxation. At a signal given, the force which was commenced in a horizontal direction, was to be suddenly carried downwards. I directed my own attention to throwing the head of the bone upwards, (at the moment the extending force was directed downwards,) by means of my knee placed in the axilla behind the patient, aiding my efforts by grasping the arm at the elbow, so as to press the elbow downwards, while I, with my other hand placed near the knee in the axilla, pushed the head of the bone upwards. Two pretty powerful efforts were necessary, and brought the head of the bone completely into the glenoid cavity: the arm could now be laid easily along the side, which had previously been altogether impracticable. The patient was perfectly satisfied that the arm was reduced. While the last extension was making, it seemed to me as if the bone was pulled off from the glenoid cavity, and afterwards there was a suppleness of the joint which enabled one to move the head of the bone freely. Every thing seemed now to have been accomplished which was attainable; the head of the bone stood up well in the socket, and the limberness about the joint could easily be accounted for by the long-continued extension and elongation of the muscles connecting the arm to the upper part of the scapula. There was some knobbiness of the head of the humerus. In examining the axilla, Dr. Chapman discovered a bony protuberance there, which felt as though it might have been the head of the humerus broken off. Not wishing to give the patient any further pain, I contented myself with a slight examination, but did not feel at ease on account of this singular appearance. As the arm recovered from the effects of the measures of reduction, I discovered that the knob in the axilla was a bony production, being a part of the effort made by nature to form an artificial joint.

The patient, after taking eighty drops of laudanum, had no pain, slept well—and, on the next day, had no fever. The arm was carefully confined to his side, but no application made. In five or six days, the swelling, which was moderate, subsided—indeed the swelling never extended below the elbow. There was considerable ecchymosis—very little soreness in the part from which the bone was torn. In one week

very little evidence of derangement was visible—at this time the head of the bone lies still loose in the socket, owing, no doubt, to the muscles having been so long upon the stretch; the joint gradually became firm.

Nothing remarkable occurred after the period just mentioned. The patient continued several months in the hospital. The strength of the arm gradually returned, and, in a few months after the reduction, he had recovered nearly his former strength, except that of the deltoid in raising his arm. This muscle had been more extended than any other, and was much thinned or emaciated. To recover the use of this muscle, I directed him to employ himself in pulling at a rope suspended above his head—by holding this and bending down his body as sailors do in hoisting, he could enable the deltoid to contract, and thus bring it into use.

I purposely deferred reporting this case till I might know the result. I have been informed, on making inquiry at the hospital, of Mr. M'Coy, the house pupil, a few days ago, that this patient has been twice to sea, and was last week at the hospital, and declared himself no longer an invalid, but able to do his duty.

ART. III. *A Case of Wounded Stomach.* By JOSEPH LOVELL, Surgeon-General, U. S. Army.

ALEXIS SAN MARTIN, a Canadian lad, 18 years of age, of good constitution, robust and healthy, was accidentally wounded by the discharge of a musket, on the 6th of June, 1822.

The charge, consisting of powder and duck shot, was received in his left side, at a distance of not more than one yard from the muzzle of the piece. It entered posteriorly, and in an oblique direction forward and inward; carrying away the integuments and muscles to the size of a man's hand; fracturing and entirely blowing off the anterior half of the sixth rib; fracturing the fifth; lacerating the lower portion of the left lobe of the lungs, and the diaphragm; and perforating the stomach. The whole contents of the musket, with fragments of clothing and pieces of the fractured ribs, were driven into the muscles and the cavity of the chest.

I saw him in 25 or 30 minutes after the accident, and, on examination, found a portion of the lung, as large as a turkey's egg, protruding through the external wound, lacerated

and burnt; and immediately below this another protrusion, which, on further inspection, proved to be a portion of the stomach, lacerated through all its coats, and pouring out the food he had taken at breakfast, through an orifice large enough to admit my fore finger.

In attempting to return the protruded portion of the lung, I was prevented by a sharp point of the fractured rib, over which it had caught by its membranes; but, by raising it with my finger, and clipping off the point of the rib, I was able to return it into its proper cavity; though it could not be retained there on account of the incessant efforts to cough. The projecting portion of the stomach was nearly as large as that of the lung; and it passed through the lacerated diaphragm and the external wound, mingling the food with the bloody mucus blown from the lung.

After cleansing the wound of the charge and other extraneous matter, and replacing the stomach and lung, as far as practicable, I applied the carbonated fermenting poultice; keeping the surrounding parts constantly embrocated with the "*lotio ammoniæ muriat. cum aceto*," and giving, internally, the "*aq. ammon. acetat. cum camphor.*" in liberal quantities.

Under this treatment a strong reaction took place in about 24 hours, accompanied with high arterial excitement, fever, marked symptoms of inflammation of the lining membranes of the chest and abdomen, great difficulty of breathing, and distressing cough. He was bled to the amount of 18 or 20 ounces, and took a cathartic. The bleeding reduced the arterial action and gave relief; but the cathartic had no effect, as it escaped from the stomach through the wound.

On the 5th, a partial sloughing of the integuments and muscles took place. Some of the protruded portions of the lung and the lacerated parts of the stomach also sloughed; and left the perforation in the stomach plainly to be seen, and large enough to admit the whole length of my fore finger into its cavity; and also a passage into the chest half as large as my fist, exposing to view a part of the lung, and admitting the free escape of air and bloody mucus at every respiration.

A violent fever continued for ten days, running into a typhoid type; and the wound became very fœtid. On the 11th, a more extensive sloughing took place; the febrile symptoms subsided; and the whole surface of the wound assumed a healthy and granulating appearance. For 17 days all that entered his stomach by the œsophagus soon passed out through the wound; and the only means of sus-

taining him was by nutritious injections per anum, until compresses and adhesive straps could be applied to retain his food. During this period no alvine evacuations could be obtained, although cathartic enemata and various other means were adopted to promote them.

In a few days after the firm dressings were applied, and the contents of the stomach retained, the bowels became gradually excited, and, with the aid of cathartic injections, a very fetid, hard, black stool was produced, followed by several similar ones, when his bowels became quite regular, and have so continued.

The cataplasms were applied until the sloughing was completed, and the granulating process fully established; and were afterwards occasionally resorted to when the wound became ill-conditioned. The aq. ammon. acet. cum camphor. was also continued for several weeks, in proportion to the febrile symptoms, and the fetid condition of the wound. No sickness nor unusual irritation of the stomach, nor even nausea, was manifested during the whole time; and, after the fourth week, the appetite became good, digestion regular, the alvine evacuations natural, and all the functions of the system perfect and healthy.

By the adhesion of the sides of the protruded portion of the stomach to the pleura costalis and the external wound, a free exit was afforded to its contents, and thereby effusion into the abdominal cavity prevented. Cicatrization and contraction of the external wound, commenced in the fifth week; the stomach became more firmly attached to the pleura and intercostals, by its external coat, but showed not the least disposition to close its orifice by granulations, which terminated as if at a natural boundary, and left the perforation resembling, in all but a sphincter, the natural anus with a slight prolapsus. Whenever the wound was dressed, the contents of the stomach would flow out in proportion to the quantity recently taken; if it happened to be empty, or nearly so, a partial inversion would take place, unless prevented by the application of the finger; and frequently, in consequence of the derangement of the bandages, the inverted part would be found of the size of a hen's egg. No difficulty, however, occurred, in reducing it by gentle pressure with the finger, or a sponge wet with cold water, neither of which produced the least pain.

In the seventh week, exfoliation of the ribs, and a separation of their cartilaginous ends, began to take place. The 6th rib was denuded of its periosteum, for about two inches

from the fractured end ; so that I was obliged to amputate it about 3 or 4 inches from the articulation with the spine ; which I did by dissecting back the muscles, securing the intercostal artery, and sawing it off with a fine saw, introduced between it and the 5th rib, without injury to the neighbouring parts. Healthy granulations soon appeared, and formed soundly over the amputated end. About half of the inferior edge of the 5th rib also exfoliated and separated from its cartilage. After the removal of these pieces of bone, I attempted to contract the wound and close the perforation of the stomach, by gradually drawing the edges together with adhesive straps, laid on in a radiated form. The circumference of the external wound was at least 12 inches ; and the orifice of the stomach nearly in the centre, two inches below the left nipple, and in a line drawn from this to the point of the left ilium. To retain his food and drinks, I kept a plug and compress of lint, fitted to the shape and size of the hole, confined there by the adhesive straps. After trying every means in my power, for 8 or 10 months, to close the orifice, by exciting adhesive inflammation in the lips of the wound, without the least appearance of success, I gave it up as impracticable in any other way than that of incising them, and bringing them together by suture ; an operation to which the patient would not submit.

By the sloughing of the injured portion of the lung, a cavity was left, as large as a common-sized tea-cup, which continued a copious discharge of pus for three months, when it became filled with healthy granulations, firmly adhering to the pleura, and soundly cicatrized over that part of the wound.

Four months after the injury was received, an abscess formed about two inches below the wound, nearly over the cartilaginous ends of the 1st and 2d false ribs, very painful and extremely sore, and producing violent symptomatic fever. On the application of emollient poultices, it pointed externally. It was then laid open to the extent of 3 inches, and several shot and pieces of wad extracted ; after which, a gum elastic bougie could be introduced 4 or 5 inches in the longitudinal direction of the ribs, towards the spine. Great pain and soreness extended from the opening of the abscess, along the track of the cartilaginous ends of the false ribs, to the spine, with a copious discharge from the sinus. In 5 or 6 days, there came away a cartilage one inch in length. In 6 or 7 days more, another, an inch and a half long, and in about the same length of time a third, two inches long ; and

they continued to come away every 5 or 6 days, until five were discharged at the same opening, the last 3 inches in length. They were all entire, and evidently separated from the false ribs. The discharge, pain, and irritation, during the 4 or 5 weeks these cartilages were working out, greatly reduced the strength of the patient, produced a general febrile habit, and stopped the healing process in the original wound.

Directly after the passage of the last cartilages, inflammation began over the lower end of the sternum, which, by the usual applications, terminated in a few days, in a large abscess; and from which, by laying it open two inches, I extracted another cartilage 3 inches in length. The inflammation then abated; and in a day or two another short piece came away, and the discharge subsided.

To support the strength under all these debilitating accidents, I administered wine with the diluted muriatic acid, and 30 or 40 drops of the tincture of assafœtida, three times a day; which seemed to have the desired effect, and very much improved the condition of the wound.

On the 3d of January, 1823, I extracted another cartilage from the opening over the sternum, an inch and a half long; and on the fourth another, two and a half inches in length, an inch broad at one end, and narrowing to less than half an inch at the other; which must have been the ensiform cartilage of the sternum. After this the sinus closed, and there was no return of inflammation.

On the 6th of June, a year from the time of the accident, the injured parts were all sound and firmly cicatrized, with the exception of the stomach, which continued in much the same condition as it was six weeks after the wound was received. The perforation was about the size of a shilling piece, with its edges firmly attached to the pleura and intercostals, and the food and drinks continually exuded, unless prevented by the plug, compress, and bandage.

The lad is now (Sept. 1824) in perfect health, and says he feels no inconvenience from the wound, except the trouble of dressing it. He eats as heartily, and digests as perfectly, as he ever did; is strong and able bodied, performing any kind of labour, from that of a house servant to chopping wood or mowing in the field. He has been in my service since April, 1823, during which period he has not had a day's sickness, sufficient to disqualify him for his ordinary duties. He will drink a quart of water or eat a dish of soup, and then by removing the compress can immediately throw it out through

the wound. On removing the dressings, I frequently find the stomach inverted to the size, and about the shape, of a half blown damask rose ; yet he complains of no pain, and it will return itself, or is easily reduced by gentle pressure. When he lies upon the opposite side, I can look directly into the cavity of the stomach, observe its motion, and almost see the process of digestion—I can pour in water with a funnel, or put in food with a spoon, and draw them out again with a syphon. I have frequently suspended flesh, raw and roasted, and other substances in the hole, to ascertain the length of time required to digest each ; and at one time used a plug of raw beef, instead of lint, to stop the orifice, and found that in less than five hours it was completely digested off, as smooth and even as if it had been cut with a knife.

This case affords a most excellent opportunity of experimenting upon the gastric fluids, and the process of digestion. It would give no pain, nor cause the least uneasiness, to extract a gill of fluid every two or three days ; for it frequently flows out spontaneously in considerable quantities ; and one might introduce various digestible substances into the stomach, and easily examine them during the whole process of digestion. I may, therefore, be able hereafter to give some interesting experiments on these subjects.

ART. IV. *Observations on Extirpation of the Ovaria, with Cases.* By JOHN LIZARS, F. R. S. E., F. R. C. S. E., and Lecturer on Anatomy and Physiology, Edinburgh.*

“Cet exemple, et celui de l'amputation totale de l'utérus et du vagin, pratiquée avec succès, autorisent également à assurer qu'avec les connoissances profondes de l'anatomie, il n'est guère d'organes sur lesquels on ne puisse exercer avec avantage les diverses opérations de la chirurgie.”—L'AUMONIER.

FROM the records of medicine, the ovaria seem as subject to disease as any other organ in the body ; and, from their attaining enormous size, producing great pain, and destroying the life of the sufferer, they have early called the attention of practitioners. They appear subject to dropsy, the fluid being contained either in one or more cysts ; and to dropsy, combined with various degenerations of texture and morbid productions. Various modes of treatment have been invented, and had recourse to, for the numerous varieties of

* From the Edinburgh Medical and Surgical Journal.

this disease. For the simple dropsical affection, tapping, or *paracentesis abdominis*, has been employed; but it has only proved a temporary palliative. Puncturing, and keeping the orifice open, so as to seize hold of the sac and remove it gradually, has effected a permanent cure; and the same end, it will appear, has been accomplished by the operation of gastrotomy, or the making a free incision into the abdomen, and removing the entire sac, especially where the tumour has consisted of some firm substance.

Le Dran cured dropsy, with scirrhus of the ovarium, by incision and suppuration; and Professor Dzondi, of Hallé, informed me that he had frequently cured this disease by incision, and the introduction of a tent, and afterwards removing the sloughing sac by the forceps.

But the total extirpation of the ovarium, both in a healthy and diseased state, has been performed; and it is the design of this paper to consider the propriety of such an operation, with the view of obtaining a radical cure of dropsical ovarium. "On châtre," says Morand, "les femelles nonseulement des volatiles, mais même des quadrupeds, sans danger. Cette operation appliquée aux femmes n'a point paru une chimère à Felix Platerus et à Diemerbroeck; c'étoit au rapport de Heyschius une operation commune chez les Lydiens, pour des raisons qui ne sont point de l'art." In other examples, also, the peritoneal cavity has been freely laid open, both accidentally and intentionally, and the intestines exposed to the contact of the air, without injury. Paulus Barbette, of Amsterdam, laid open the abdomen, and disengaged the strangulated or twisted intestine in a case of volvulus. Bonetus relates the case of a lady who was dying of intususception, when a military surgeon opened the abdomen, disentangled the twisted intestine, and effected a cure. Schacht operated for the same peculiar disease with success. Besides these, there are many well-authenticated cases of the Cæsarean operation performed, even for six times on the same woman, with success. In mostly all the cases of diseased ovaria on record, and in all the dissections of this disease which I have witnessed, the tumour was appended by a small pedicle, merely the broad ligament of the uterus. The largest I ever saw, I have kept as a preparation; and, although a great quantity of the gelatinous matter, and all the serous fluid, has been necessarily removed, it still weighs 25 pounds.

But the practicability of extirpating a diseased ovarium does not rest on theory. It has been proved by experience. L'Aumonier, who was chief surgeon of the great hospital at

Rouen, about fifty years ago, extirpated the ovarium successfully ; and since his time an ovarium has been repeatedly removed, and sometimes with success, particularly in France, Germany, and America. Dr. Smith, of Connecticut, lately extirpated an ovarium in a dropsical state, successfully. Three very instructive cases occurred to Dr. Macdowal, of Kentucky ; and the following history of them was sent, about seven years ago, to the late celebrated surgeon Mr. John Bell, who was then on the continent, and came into my hands as having the charge of his patients and professional correspondence, during his absence.

“ In December, 1809, Dr. Macdowal was called to see Mrs. Crawford, who had for several months thought herself pregnant. She was afflicted with pains similar to labour pains, from which she could find no relief ; and so strong was the presumption of her being in the last stage of pregnancy, that two physicians, who were consulted on her case, requested,” says Dr. Macdowal, “ my aid in delivering her. The abdomen was considerably enlarged, and had the appearance of pregnancy, though the inclination of the tumour was to one side, admitting of an easy removal to the other. Upon examination, I found nothing in the uterus ; which induced the conclusion that it must be an enlarged ovarium. Having never seen so large a substance extracted, or heard of success attending an operation such as this, I gave to the unhappy woman information of her dangerous situation. She seemed willing to undergo an experiment, which I promised to perform if she would come to Danville, the town where I resided, a distance of sixty miles. This seemed almost impracticable, by even the most favourable conveyance ; yet she performed the journey in a few days on horseback. With the assistance,” says Dr. Macdowal, “ of my nephew and colleague, I commenced the operation, which was conducted in the following manner. Having placed her on a table of the ordinary height, on her back, and removed all her dress which might in any way impede the operation, I made an incision on the left side, about three inches distant from the *musculus rectus abdominis*, continuing it nine inches in length, parallel with the fibres of the above-named muscle, extending into the cavity of the abdomen, the parietes of which were a good deal contused, which we ascribed to the resting of the tumour on the horns of the saddle during the journey. The tumour then appeared full in view, but it was so large that we could not remove it entire. We put a strong ligature round the fallopian tube, near the uterus, then cut open the tumour,

which was the ovarium and fimbriated parts of the fallopian tube very much enlarged. We took out fifteen pounds of a dirty gelatinous-looking substance; after which we cut through the fallopian tube, and extracted the sac, which weighed seven pounds and a half. We then turned her on her left side, so as to permit the blood to escape. After this we closed the external opening with the interrupted suture, leaving out, at the lower end of the incision, the ligature that surrounded the fallopian tube. Between every two stitches we put a strip of adhesive plaster, which, by keeping the parts in contact, hastened the healing of the incision. We then applied the usual dressing, put her to bed, and prescribed a strict observance of the antiphlogistic regimen. As soon as the external opening was made, the intestines rushed out upon the table; and so completely was the abdomen filled by the tumour, that they could not be replaced during the operation, which lasted about twenty-five minutes. In five days I visited her, and, much to my astonishment, found her engaged in making up her bed. I enjoined her to take particular caution for the future; and in thirty-five days she returned home in good health, which she continues to enjoy."

"Since the above case," says Dr. Macdowal, "I was called to a negro woman, who had a very painful hard tumour in the abdomen. I gave her mercury for three or four weeks, with some abatement of pain; but she was still unable to perform her usual duties. As the tumour was fixed and immoveable, I did not advise an operation; though from the earnest solicitation of her master, and her own distressed condition, I agreed to the experiment. I placed her on a table, laid the abdomen open, as in the preceding case, inserted my hand, and found the ovaria very much enlarged, painful to the touch, and firmly adhering to the *vesica urinaria* and *fundus uteri*. To extract this, I thought, would be instantly fatal; but, by way of experiment, I plunged the scalpel into the diseased part, when the same gelatinous substance, as in the above case, with a profusion of blood, rushed to the external opening, which I conveyed off by placing my hand under the tumour, suffering the discharge to run over it. Notwithstanding my great care, a quart or more of blood escaped into the abdomen; and, after the hæmorrhage ceased, I removed, as cleanly as possible, the blood, in which the bowels were completely enveloped. Though I considered the case as nearly hopeless, I advised the same dressings and the same regimen as in the above case. She has entirely recovered from all pain, and pursues her ordinary occupations."

In May, 1816, "a negro woman was brought to me," says Dr. Macdowal, "from a distance, in whom I found the ovaria much enlarged, and, as the tumour could be easily removed from side to side, I advised the extraction of it. As the tumour adhered to the left side, I changed my place of opening to the linea alba. I began the incision, in company with my partner and colleague, Dr. Coffee, half an inch below the umbilicus, and extended it to within an inch of the os pubis. I then put a ligature round the fallopian tube, and endeavoured to turn out the tumour, but could not. I therefore extended the incision upwards two inches above the umbilicus, turned out a scirrhus ovarium weighing six pounds; and cut it off close to the ligature formerly put round the fallopian tube. I now closed the external opening, as in the former case, and, as the patient complained of cold and chilliness, I put her to bed before dressing her, gave her a wine glassful of cherry brandy and thirty drops of laudanum, which, soon restoring her accustomed warmth, she was dressed as usual. She was well in two weeks, though the ligature could not be removed for five weeks, at the end of which time the cord was taken away; and she now officiates as cook to a large family, without complaint."

In the year 1821, I was requested by my friend, Dr. Campbell, lecturer on midwifery, to visit a woman with an abdomen as large as if in the ninth month of gestation. On examination, the tumour occupied the whole abdominal cavity, and appeared to roll from side to side; the uterus *per vaginam* felt natural, and her catamenia had been regular, but caused excruciating pain when they occurred. She stated that she was twenty-seven years of age, had borne only one child, and in twelve months afterwards had a miscarriage, two or three months after which, towards the end of 1815, she became sensible of a considerable enlargement of her belly, that began on the left side, and which she attributed to several blows and kicks received from a brutal husband, from whom she was now separated; that her neighbours now abused her, and made such complaints to her employers that they dismissed her. At that time she earned, and now earns, her livelihood by binding shoes. Being now without the means of support, she applied to a county hospital, but was in a few days dismissed, on the supposition of being with child. She then consulted a number of respectable practitioners, but all of them cruelly taunted her with being pregnant. At the end of two years she perceived a small moveable swelling in her left groin, which she allowed to increase for twelve months,

when she came to Edinburgh, and, on consulting a surgeon, he opened it with a lancet, and discharged a large quantity of thin matter. On examination this was a lumbar abscess, which she ascribed to a fall on her back three years previously. The evacuation of this fluid did not in the least diminish the magnitude of the abdomen; and she imagined she could distinguish between the pain of the lumbar abscess and that of the tumour in the abdomen. She was admitted into the hospital of this place, and remained for thirteen weeks, without receiving any relief. She consulted the chief medical gentlemen of this city, many of whom pronounced her pregnant, and all of them tried to dissuade her from an operation. Two put her under different courses of mercury, and, after a consultation, one punctured the abdomen for dropsy of the ovarium.

Before having recourse to the operation of gastrotomy, I deemed it my duty to have the opinion of the principal practitioners of this city, either by personal consultation, or by sending the patient to them. The woman herself also had previously waited on many of them. Some said that to operate would be rash; others, that I would kill my patient. It was agreed by all, that there was a disease of one or both ovaries; and she had been twice tapped for dropsy of the left ovary, the result of a formal consultation of some of the ablest medical men of this city. Convinced, from the history of the disease in the records of medicine, and from gastrotomy having been successfully performed for volvulus, and from the Cæsarian section, that there was little to apprehend either from loss of blood or peritoneal inflammation, I felt desirous to endeavour to relieve the woman by an operation; but was anxious to have the sanction of some other surgeon or physician besides my friend Dr. Campbell, who at once offered to assist me. All whom I took to see the patient, and all to whom I sent her, said that the disease was an affection of the ovarium, but all of them condemned an operation. My patient, therefore, abandoned to her gloomy condition, called on me repeatedly, urging me to try the operation, otherwise she would do it herself. At last, as her pain became perfectly intolerable, and she was still urgent, I resolved to operate. During the preceding period I had directed my attention to the lumbar abscess, and applied caustic eschar after eschar. Wednesday, 24th October, 1823, was the day appointed for the operation; therefore, on the day preceding, she took a dose of the compound powder of jalap, which operated also on Wednesday morning, so as to preclude the necessity of

administering an enema ; she also made water immediately before, in order to empty the bladder. The emptying of the rectum by a clyster, and the drawing off the urine, or taking care that the patient makes water, are circumstances of some consequence to be attended to, in all operations of the abdominal cavity. As inflammation appears to be induced generally by exposure to cold ; and as these cases succeeded so well in America, I desired the room to be heated to 80° of Fahrenheit. When the temperature of the room had arrived at this heat, I placed the patient on a table, covered with a mattress, and two pillows supporting her head, and commenced the operation, in the presence of Dr. Campbell, Dr. Vallange, late surgeon of the 33d regiment, Mr. Bourchier, surgeon of the 36th regiment, and several other medical gentlemen, by making a longitudinal incision, parallel with, and on the left side of the linea alba, about two inches from the ensiform cartilage, to the crista of the os pubis, through the skin and cellular substance, when the peritoneum appeared, the recti muscles being separated by the distension consequent on the present disease and former pregnancy. I then made a small incision through the peritoneum, introduced a straight probe-pointed bistoury, and made a more extensive opening, into which I inserted the fore and middle fingers of the left hand, so as to direct the instrument, and to protect the viscera. With this instrument I made the internal to correspond with the external incision, while my friend, Dr. Campbell, who assisted me, endeavoured, but in vain, to confine the intestines within the abdominal parietes. Apprehensive of peritoneal inflammation, of which many said my patient would die, I enveloped the intestines in a towel dipped in water about 98°. I now proceeded to examine the state of the tumour, when, to my astonishment, I could find none. I next requested Drs. Campbell, Vallange, and Bourchier, to make themselves satisfied that there was no tumour, when Dr. Vallange observed that he felt a tumefaction on the left side of the pelvis. This, on investigation, was found to be a flattened tumour of no great magnitude, at the left sacro-iliac synchondrosis of the pelvis, lying beneath the division of the common iliac artery, into its external and internal branches. Having satisfied all present that this was not the tumour which was anticipated,—that it was impracticable to extirpate it,—and that the uterus and ovaria were perfectly sound and healthy, I proceeded to return the intestine, and to stitch up the wound, carrying the needle as deep as possible, and applying straps of adhesive plaster between the stitches.

Compresses of lint were next laid along, and the nine-tailed bandage bound round the body. I then carried her to bed, and gave her an anodyne draught of forty drops of laudanum, which was almost immediately rejected. Ordered her warm toast-water and tea.

When the intestines protruded, and baffled all the efforts of Dr. Campbell and the other gentlemen to confine them, I shall never forget the countenances of my pupils and the younger members of the profession. This fact of the intestines being forced out, proves, along with others, that the lungs can be expanded although atmospheric air be admitted into the abdominal cavity; the diaphragm acted with great vigour and with powerful impetuosity. The operation was performed at one o'clock of the day, and by seven in the evening she had vomited twice; had flying pains in the abdomen, a little hurried breathing, pulse at 100, and some thirst; she also felt uneasiness from inability to void her urine, which was drawn off by the catheter; and, as a precaution, I bled her to syncope, which occurred when 11 ounces were abstracted. She lost little or no blood during the operation. An anodyne draught was given her, which was again vomited. Thursday morning, she had little or no sleep, still flying pains about the abdomen, particularly in the wound, with hurried breathing, and the pulse at the same rate; the skin felt hot, and the tongue was white and a little crusted, so that I repeated the bleeding to syncope, which occurred when 13 ounces were withdrawn. After the bleeding she felt easier, and by the evening these symptoms had disappeared; I ordered her five drops of the sedative solution of opium, which remained on the stomach, but produced no sleep: I allowed only toast-water, tea, coffee, and gruels, warm. On Friday morning she felt much better; was pained only once in the hour or so, her breathing was natural, her pulse 90, and soft, her skin cool and soft, and her tongue white and moist. The urine still required the employment of the catheter. The same low diet continued. At bed-time the sedative solution was increased to seven drops. Saturday morning, had a tolerable night, and felt considerably better; felt, however, a little uneasiness in the wound, which had not troubled her since Thursday morning; her pulse was 85, and soft, the skin natural, and tongue cleaner. Felt a little appetite, and took some ground rice with sugar. To-day I dressed the wound, and found the line of incision united from the one end nearly to the other; at the pubes there was a small portion everted; the adhesive straps were renewed,

but the stitches were allowed to remain. She was allowed panada, rice-pudding, or oatmeal porridge. At eight in the evening, she felt acute pain in the right iliac region, darting upwards; her pulse was 108, full, and strong; the skin hot, and some thirst. I therefore bled her to fainting, which followed after 16 ounces were abstracted. In an hour after a domestic enema was administered, and, lastly, the sedative solution of opium. The enema operated well, and she fell asleep. Sunday morning, after a good night, she felt greatly better; no pain of wound or abdomen, no thirst, and her pulse 90, and soft, her skin cool, and tongue much cleaner. The wound was dressed, and two stitches withdrawn. She was able this morning to make water naturally; in the evening she became uneasy, the enema was repeated, and the opiate omitted. Monday morning.—Had rested indifferently, and her pulse was 100, and feeble; skin rather hot, but tongue cleaner. Pressure on the abdomen gave no pain. The wound was dressed, and all the stitches were withdrawn. An enema of castor oil was administered. Desired to have the oatmeal gruel acidulated with the supertartrate of potass. At 3 *p. m.* the enema had not operated, so that she was ordered two drachms of supertartrate of potass mixed with treacle, every two hours, till it should operate. By 8 *p. m.* the enema had operated, and brought away some feces, which gave her great relief. The pulse was 112, her skin and tongue natural, and quite free from pain. The supertartrate of potass continued. Tuesday morning, although she had slept well, and the physic had operated twice in the morning, the tongue and skin natural, and was perfectly free from pain, yet the pulse was still 112. The wound dressed; little or no discharge, and chiefly from the everted edge at the pubes. Ordered veal broth for dinner. Wednesday, eight days from the operation, had slept soundly; was free from pain; tongue and skin natural, and pulse down to 96, and soft. Ordered veal or chicken broth. She continued daily to recover from this day to Sunday, when, although the bowels had been carefully attended to, both by laxatives and enemata, yet they felt so distended as to excite much uneasiness and irritation. An enema was administered in the morning, and she took five grains of calomel, and in two hours after, half an ounce of the phosphate of soda; both of which producing no effect, the latter was repeated after two hours had elapsed. In the evening another enema was administered, which, as in the morning brought away a considerable quantity of feces, but without relief. Two aloetic

pills were therefore given every three hours, till six were swallowed, when, no motion having been produced, a drop of the oil of croton was given, which in half an hour excited vomiting. One cathartic enema after another was given, till a profuse quantity of feculent matter was discharged, and then she felt relieved. From this day she gradually recovered, without any untoward symptom; sat up out of bed on Wednesday, fourteen days after the operation, and went to the country on Saturday the 16th October. She now lives in town, earning her livelihood as formerly, by binding shoes, but is often severely tortured with pain.

The reason why all of us were deceived in this woman's case, was, the great obesity and distended fulness of the intestines, together with some protrusion pubic of the spine at the lumbar vertebræ. This did not at all appear conspicuous before operating, otherwise it should and must have struck some of the medical gentlemen who examined her; nor did it occur to myself during the operation, nor until some time after, when I could find no just cause for being so singularly deceived.

From this case, and those which I have enumerated, it appears to me that there is little danger to apprehend, in laying open the abdominal cavity; and that in diseased ovarium, extra-uterine conceptions, *fœtus in utero* with deformity of the pelvis preventing embryulcia, aneurism of the common iliac arteries or of the aorta, volvulus, internal hernia, cancer of the uterus, and foreign bodies in the stomach threatening death, we should have recourse early to gastrotomy. The delay in such cases is more dangerous than the operation. To show what freedom may be used in diseased ovarium, I have received, since writing the above, the following history of a case from my friend Mr. Edward Scudamore, surgeon at Wye in Kent.

In 1821, A. C. 36 years of age, had been repeatedly the subject of *paracentesis abdominis* for ovarian or encysted dropsy, when fluid in increased quantities, and varying in quality in each operation, was drawn off. Her health declining, and her constitution resisting each effort to cure the disease, any proposition holding out the most remote hope was eagerly listened to. The trocar and canula were again introduced, the fluid drawn off, and the canula left with a plug inserted into its mouth. In a few days the plug was removed, and the accumulated fluid discharged, which operation was repeated for several successive times, after eight days interval between each. These attempts proving fruit-

less, and no irritation being produced by the canula, diluted port-wine was injected in one instance, and a solution of sulphate of zinc in the other; both of which merely produced a sensation of heat while they remained in the cavity. Many weeks elapsed after these operations, when the constitution gradually sinking, she expired.

ART. V. *Observations on Mental Derangement, made in the Hospital Salpetriere at Paris.* By H. BARDSLEY, M. D., one of the Physicians to the Manchester Infirmary, &c. &c. &c. late President of the Royal Medical Society of Edinburgh.*

IN the hospital Salpetriere at Paris, which contains between seven and eight hundred female lunatics, the best possible opportunities are afforded for witnessing every variety of mental hallucination, from hypochondriasm and melancholy, to the most furious mania. The aberrations of the human intellect are there strikingly exhibited. On entering an institution of this kind, it is impossible to suppress those feelings of sympathy and commiseration, which are produced by the sight of so many individuals deprived of that faculty which is the source of man's most elevated enjoyments. I confess I was highly gratified with the regularity and neatness which prevailed in every department of this spacious infirmary for the mind. The distribution of the different classes of patients into separate divisions of the building, is attended with many advantages. The taciturn, playful, and harmless, are, by this regulation, relieved from the noise and danger to which their intercourse with the more furious and irascible patients would necessarily expose them. The moral treatment is conducted on the principle of mildness and persuasion. This change is chiefly to be attributed to the exertions of the venerable Pinel, whose example is followed by his able and very intelligent successor, M. Esquirol. The severities formerly exercised towards these pitiable creatures, were not only discreditable to the humanity of their medical attendants, but injurious to the patients themselves in a curative point of view. On this subject, M. Pinel thus feelingly remarks: "Les aliénés loin d'être des coupables qu'il faut punir, sont des malades dont l'état pénible merite tous les égards dus à l'humanité souffrante, et dont on doit recher-

* From the Edinburgh Medical and Surgical Journal.

cher par les moyens le plus simples à retablir la raison égarée."

One leading aim in the moral management is to prevent ennui, and to divert the mind from brooding on the visionary fantasies of its own disordered imagination, by affording the patients regular and suitable employment. The medical treatment appeared to me inefficient and defective. So much stress is laid on the paramount importance of moral management, that active remedial means are almost precluded. Nature is left, in a great measure, unassisted by the powers of medicine. I am at a loss to account for this inert practice, as it is opposed to the opinions delivered in the writings of the very physicians who adopt it. They admit the influence of morbid bodily actions in producing insanity, and yet disregard those agents which are most likely to remove them. In cases of organic alteration of the brain, it must be confessed that we cannot reasonably expect to derive much benefit from medicine; but daily experience confirms the utility of a judicious employment of remedies in many cases of mental alienation, in which moral management has been inefficaciously resorted to for relief. Few practitioners in this country, who, from their connexion with receptacles for the insane, have enjoyed opportunities of witnessing the influence of medical treatment in insanity, will, I imagine, agree with M. Georget in the following assertion: * "Qu'à l'exception d'un petit nombre de cas, où l'on ne peut contester leur effets salutaires, (des medicamens,) ils ne peuvent nous servir que faiblement à changer, ou à modifier bien sensiblement la succession des phenomenes," &c.

That attention is not paid to the functions of the digestive organs, which their importance in the mental balance seems to indicate.

Dr. Spurzheim very justly remarks,† "that the greatest number of cases of insanity, produced by sympathetic causes, originate from deranged functions of the digestive organs,—that sort of insanity which is very seldom cured by nature alone, and is not sufficiently understood by medical practitioners." Tamarind water, acidulated whey, and various emulsions, supply the place of more active and useful remedies. Purgative medicines are prescribed in a manner not at all likely to ensure the acknowledged good effects which

* Georget, *De la Folie*, p. 300.

† *Observations on Insanity*, p. 300.

attend their regular and judicious exhibition in many cases of mental affection.

Pinel, Esquirol, and Georget, speak unfavourably of the efficacy of venesection; and, indeed, this operation is rarely employed in the Salpetriere. Emetics are not in very frequent use. The cold bath is almost exploded from the practice of the hospital. The tepid bath, on the contrary, forms a very essential part of the medical treatment. Such patients as are selected by the medical attendant, enter the bath twice or thrice a week, or as frequently as he may judge proper. The period of immersion varies according to the effects wished to be produced; but it seldom exceeds one hour, and is rarely less than half an hour. I have witnessed its beneficial effects in many instances. The system of pumping, or of directing a stream of cold water upon the head, from a height of three or four feet, whilst the body is immersed in tepid water, is not so much practised by M. Esquirol as it was by his predecessor M. Pinel; for he is decidedly of opinion (and this opinion is derived from long experience) that it seldom produces any permanent good effects. His pupil and assistant, M. Georget, mentions his having known "its continued use to produce disorganization of the *cerebrum*, and to determine the incurability of insanity in a number of cases." When every other attempt to enforce tranquillity and mild behaviour on the part of some of the more mischievous and unmanageable patients, has failed, pumping is occasionally employed as a last resource, and sometimes with the desired success. This mode of punishment is somewhat harsh; but, if applied with due care and moderation, it will be found not altogether undeserving of trial. In the following case, as in several others, its use was attended with a favourable result.

A young brunette, of robust habit of body, had been for several years subject to violent exacerbations of insanity for a week or ten days preceding the menstrual discharge. Threats, bodily punishment, and various modes of coercion, had been employed to deter her from unremitting attempts to commit suicide; but on several occasions she had nearly succeeded in her dreadful purpose. At the desire of her friends, she was admitted into the Salpetriere. As soon as this state of fury supervened, she was ordered to be conducted to the bath, and to have cold water applied to the head in the manner above alluded to. Its effects were striking; for, though a moment before she was vehemently vociferating execrations against her friends and all present, and using

violent means to extricate herself from her novel situation, when the shock came she seemed in a moment to have lost both mental and physical force. In about ten minutes, the paroxysm returned, and the affusion was again repeated with a similar result. It was found unnecessary the succeeding month to resort to this practice; for, during the height of her excitement, the mere mention of the bath was sufficient to check it, and render her tranquil and composed.

The food, clothing, and bedding, are excellent in their kind. The use of the wooden clogs appears to me objectionable; for, though they preserve the feet dry, still, in a paroxysm of maniacal fury, they may become the instruments of severe and fatal mischief.

It would be superfluous to enter into a more particular account of this Institution, as Pinel, Esquirol, and Georget,* have given such minute and accurate descriptions of it in their publications. I shall therefore merely transcribe from my note book such cases, with the *post-mortem* appearances, as seem most likely to throw a little light on the pathology of mania.

BARBARA —, ætat. 43, had laboured under periodical fits of insanity for five years. Her conduct and conversation evinced at times great mental composure. Her feelings towards her parents and her friends, which, in her lucid intervals, were tender and affectionate, seemed, during the maniacal paroxysm, to undergo a complete change, for she constantly spoke of them in terms of hatred and contempt, and represented their conduct as unjust and barbarous. This state of perturbation generally continued for a few weeks, and was afterwards succeeded by a behaviour calm and decorous. She had been occasionally subject to epileptic fits for several years, which recurred much more frequently for some months previously to her death. She was seized with cough, dyspnœa, and œdema of the inferior extremities, which symptoms, during the last four months of her life, were accompanied with copious purulent expectoration, and occasional hæmoptysis. Her strength rapidly failed, and she died a victim to confirmed phthisis. *Dissection.*—The cranium was extremely thin. The dura mater was quite natural. There was no congestion in the vessels of the pia matter, and the choroid plexuses were colourless. The lateral ventricles

* Consult M. Pinel's Treatise "sur l'Aliénation Mentale;" an excellent article by M. Esquirol, entitled "Hospice d'Aliénés," in the Dictionnaire des Sciences Medicales; and Georget's Essay "De la Folie."

contained a small quantity of serum. The lateral lobe of the left hemisphere of the brain had assumed a fibro-cartilaginous texture ; and it was found, upon minute examination, that the temporal fossa of that side was so much less than its opposite, as necessarily to have compressed the portion of brain it contained. The anterior and posterior lobes, the right hemisphere, the cerebellum, and the medulla oblongata were perfectly natural. On opening the thorax, adhesions were found between the pleuræ costalis and pulmonalis, but they were readily separated without laceration. The substance of the lungs externally appeared healthy ; but, on dividing the right lung with the scalpel, two vomicæ of considerable size, each lined with a semi-cartilaginous membrane, and irregularly intercepted by fibrous bands, were discovered in its upper and middle lobes. The upper lobule of the left lung was much consolidated, but the inferior lobe was in a natural state. The *bronchi* of the right lung were filled with purulent fluid, those of the left presented no unusual appearance. The other cavities were not examined.

A woman, ætat. 45, had been an idiot during 15 years, and continued in this state of fatuity until her death. She had constantly complained of obtuse pain in the frontal region, and required the daily exhibition of drastic purgatives to obviate excessive costiveness. *Dissection.*—The pericranium adhered firmly to the skull, but the cranium was natural. The dura mater and its processes were converted into an osseo-cartilaginous substance, and the tunica arachnoidea was somewhat thickened and opaque. Pia mater healthy. The brain was much indurated, but the *cerebellum*, *medulla oblongata*, and cerebral nerves were, on the contrary, soft and pulpy. The posterior cornua* of the lateral ventricles were carefully examined, and in each was found the elongation termed Hippocampus Minor. The spine, and its membranes and nerves, were free from any morbid appearance. The lungs and heart were in a healthy state. The small intestines were the only abdominal viscera which exhibited marks of disease. The inner membrane of the duodenum was highly vascular, whilst that of the jejunum and ileum, particularly near the termination of the latter gut, was beset with numerous sphacelated patches. The uterus and bladder were healthy.

ANTONIA —, ætat. 51, had been the subject of mental derangement for several years. Her memory was surprisingly

* The posterior cornua were wanting in the heads of two idiots examined by Dr. Hastings.

strong and vigorous. She had a perfect recollection of the most trifling incidents which had occurred at a very early age, and could relate them with a minuteness and accuracy scarcely to be credited. Her insanity was of a lively character, but her conduct was at all times orderly and peaceable. She complained during the last nine months of her life of severe pain in the hypogastric region, which was attended with a copious sanious discharge from the vagina. Her health gradually declined, and she expired in a state of extreme debility and emaciation. *Dissection*—The encephalon was perfectly healthy, with the exception of the pineal gland* and its peduncles, which were considerably enlarged and indurated. The viscera of the thorax and abdomen were free from disease. The cervix uteri was found in a state of ulcerated carcinoma; and its inner membrane was studded with several scirrhous tumours of different sizes, which could not be detached from this viscus without lacerating a portion of its substance. Bladder sound.

MARGARET —, ætat. 36, had been afflicted with insanity for the period of four years. It appeared, from the statement of her friends, that disappointment in a matrimonial alliance had been the cause of her derangement; and indeed her conversation had a constant reference to the object of her devoted attachment, and was at all times tender and affectionate. She occasionally enjoyed lucid intervals, during which her conduct was perfectly correct. This unfortunate female had for a length of time experienced considerable pain and difficulty in voiding her feces, which were scanty; and, at the time of her death, scarcely thicker than a common pencil. Blood was occasionally mixed with them; and the discharge from the gut, which before had been mucous, now became decidedly purulent. The complaint seemed to have been for a long time stationary; but its progress, during the last two months of the patient's life, was very rapid. Her constitution was quite exhausted; and death happily released her from a state of severe and continued suffering. *Dissection*.—On examining the brain, it was discovered that a deposition of serum in considerable quantity had taken place between the tunica arachnoidea and pia mater. The ventricles were nearly filled with fluid, and the *foramen monroianum* was much enlarged. The convolutions had become large and very distinct; but the cerebral mass presented no devia-

* Several cases of insanity are described by Morgagni, in which this gland was found enlarged.

tion from a healthy state. The lungs and heart were sound; and there was no perceptible disease in any of the abdominal viscera, except the rectum. The upper portion of this gut was in a state of scirrhus-contraction, which, in the inferior portion, had degenerated into ulceration, and had partially extended to the vagina. The caliber of the bowel was so much diminished, that a small quill could not be introduced without considerable force. The sigmoid flexure of the colon was much dilated, and it contained a vast accumulation of fecal matter. Its coats also were harder and thicker than we find them in a natural state. The uterus was sound. The muscular fibres of the bladder were somewhat enlarged and indurated, but its inner membrane was healthy.

AGNES —, ætat. 16. This interesting young female was insane on one particular point.* She fancied herself no less a personage than a daughter of the King of France, and treated her medical and other attendants with a degree of hauteur, which her supposed rank seemed to authorise. Her natural disposition was proud and haughty. Occasionally she condescended to converse with strangers, when they approached her with becoming respect and humility; and she evinced considerable knowledge on several literary subjects, to which her attention had been directed in the course of a previous liberal education. Her general health had for some time suffered from great irregularity in the quantity, quality, and duration of the catamenia. She was seized suddenly with a severe attack of peripneumony, which terminated fatally in the course of a fortnight. *Dissection.*—No morbid appearances were observable in the brain. Each thoracic cavity contained a small quantity of serous fluid. The pleuræ costalis and pulmonalis of both sides of the chest were firmly conjoined. The right lung was completely hepatized; the left was very firm, compact, and turgid. The heart was sound. The abdomen and pelvic viscera presented no unusual appearances.

MARY —, ætat. 51, had long laboured under mental alienation. The character of her malady at its commencement was furious and vengeful; but, for the last few years, it had been succeeded by a state of profound melancholy and panophobia. Her head was constantly under the bed

* This form of mental hallucination is termed by the French "monomanie." It generally derives its character from the natural disposition of the patient. Amongst women, M. Georget says, "La vanité plutôt que l'orgueil porte les femmes à se faire reines ou princesses; elles ont plutôt en vue dans cet état moral la parure, que le pouvoir de commander."

clothes, and when they were removed for the purpose of administering food and medicine, she viewed every object which approached her with an eye of suspicion and distrust. She could not be prevailed upon, either by the most urgent entreaties or powerful threats, to utter a single word. She continued in this state until her death, which seemed to proceed rather from a gradual decay of the constitution than derangement of any particular organ. *Dissection.*—The brain was somewhat harder than natural, but in every other respect it was perfectly healthy. The thoracic organs were sound. The abdominal viscera appeared healthy; but the mucous membrane of the small intestines exhibited marks of inflammatory action, yet no disorganization in their structure had taken place. The bladder and uterus were free from disease.

In each of the above cases, we perceive a wide difference in the character of the mental hallucination. In the first, the natural affections were completely changed, and the intellects sustained a periodical loss of vigour; in the second, the patient had sunk into a state of helpless fatuity, being treated in every respect like a child; in the third, the faculties of reasoning and judgment were impaired, whilst that of memory had acquired increased strength, readiness, and susceptibility; in the fourth, the mind continued to brood upon that object which had last occupied its most frequent meditations when in a state of health; in the fifth, the reason was perverted on one particular point; and, in the last, mania had degenerated into profound melancholy. How are we to account for this diversity of mental aberration? Can it be explained by any peculiarity in the structure of the brain, or in its deviation from a healthy state? In one instance, a portion of its substance was found in a cartilaginous state; in another, the dura matter was diseased; in a third, the pineal gland was unusually large and firm; in a fourth, fluid was deposited in considerable quantity in the ventricles; whilst in two well-marked cases of insanity, the texture of the cerebral mass presented no diseased appearances. Are we authorised in supposing, that the alteration observed in the organic structure of parts of the brain in four cases, was the cause of the mental derangement under which the patients laboured? If so, where are we to look for the cause of insanity in the other two? not in the brain, (although Dr. Spurzheim says, "the cause of every derangement of the manifestations of the mind belongs to organic parts,") for it was perfectly sound. We meet, too, with similar morbid appear-

ances after disorders of a very different kind, in which the mind has to the last enjoyed the undisturbed exercise of its faculties. In idiotism, which is mostly congenital, examinations after death generally afford us evidence of diseased organization of the brain; but in other disorders of the mind, they frequently fail to detect any physical lesion or malformation. Mr. Lawrence, who, from his connexion with Bethlem, must have very considerable experience in the pathology of mania, states, that in the great majority of cases which he has examined, the most obvious marks of disease were found in the brain; he, indeed, goes so far as to affirm, that he has scarcely ever met with a case of insanity in which the brain was found entirely sound. The results of his pathological investigations are at variance with those of Pinel, Esquirol, and Georget. The last named physician thus expresses himself respecting the morbid appearances which were observed in the examination of nearly 300 lunatics: * “Toutes les alterations que nous avons observées sur les aliénées de la Salpêtrière sont consecutives au developement de la folie, excepte celles des cerveaux d’idiotes, qui sont primitives et liées à l’état intellectuel.” The want of uniformity in the parts of the brain which are found diseased in particular mental affections, is one great cause of the obscurity in which the pathology of mania is at present enveloped.

ART. VI. *Observations on Elephantiasis, as it appears in the Isle of France.* By J. KINNIS, M. D. Communicated by Sir J. Macgrigor, Director-General of the Medical Department of the Army.†

Sir,

WHILE stationed in the Isle of France, I had opportunities of examining seven cases of the tubercular elephantiasis; and, as the history of that disease is still very imperfect, and can only be improved by descriptions of the phenomena it presents in the different countries in which it prevails, I take the liberty of laying before you the result of my observations.

In the patients I examined, the parts chiefly affected were the face, ears, and extremities. The skin of the face was ir-

* See page 500 of his Treatise before named.

† From the Edinburgh Medical and Surgical Journal.

regularly thickened, swollen, and tuberculated ; the tubercles being either small, elevated, hemispherical, or large, flat, oval, and irregular. They were generally large on the forehead, and separated from each other by deep furrows ; smaller and more confluent on the cheeks, which sometimes hung down from the bones, stretching and depressing the corners of the mouth. The wings of the nose were enlarged, shapeless, and unequal ; each possessing its cluster of tubercles, with occasionally a strong one on the bridge. The lips, when affected, were penetrated by hard, whitish bodies, like recently formed cicatrices ; the lobes of the ears were knobbed, thickened, and enlarged ; and, in one or two cases, the border of the helix was notched with small tubercles. The tubercles were smooth, glossy, shining, frequently confluent, sometimes on a level with, or only to be felt imbedded in, the skin, and varied from one or two lines to above an inch in diameter. In mulattoes they were of a light, livid, copper colour ; in blacks, merely a shade deeper than the sound skin. Their cuticular lines, folds, and depressions, were every where more distinct and larger than natural. The deeply wrinkled forehead, the bare swollen eyebrows, the heavy pendulous cheeks, the irregular expanded nose, the depressed mouth, and the thickened, elongated ear-lobes, combined to render singularly harsh and uncouth the whole visage, and to disguise the form and expression of every individual feature.

The internal surface of the mouth was generally more or less affected ; the tubercles being either red, smooth, shining, about the size of a split-pea, and confined to the root of the tongue ; or yellowish-red, flat, confluent, and occupying the greater part of the palate, uvula, fauces, and tonsils ; or stuck upon the hard palate, in the form of a single, large round bottom, with an irregular surface and depressed centre ; or, lastly, particular parts of the lining membrane of the mouth were merely of a livid colour, without other change. In one case, the point of the uvula was tucked back, and appeared as if cut off until examined by a probe : in another, the uvula was relaxed and elongated nearly an inch ; and, in the same case, the partition of the nostrils was ulcerated, and discharged a considerable quantity of matter : in a third case, one of the nostrils was blocked up with inspissated matter, apparently likewise from ulceration. Several of the patients were subject to nasal hemorrhage, and most of them had a hoarse nasal voice. They experienced no inconvenience from the presence of tubercles in the mouth, and one or two

were not even aware of their existence previous to examination.

In one mulattress, the trunk had a faintly mottled appearance, pale, copper-coloured spots being dispersed over it: in another, discoloration of the same kind was confined to the breasts: and, in a mulatto boy, there were numerous, small, distinct tubercles on the loins. In the remaining four cases, the whole skin of the neck and trunk was perfectly natural in colour and texture, perspired freely, and enjoyed unimpaired sensibility.

In one case, the scrotum was beset with small confluent shining tubercles.

The inside of the thighs and arms, and the flexures of the large joints, were seldom affected with the disease. On the back and outside of the former, and, on the calves of the legs, the skin was moveable over the subjacent muscles, but thickened, indurated, swollen, smooth, shining; and either divided into gentle risings and depressions, or pervaded by flat clusters of tubercles, not sensibly elevated above its surface, or studded with distinct tubercles. The skin of the fore arms, legs, and feet, was harsh, dry, scaly, or scabbed; in some parts adherent to the bones, in others loose, wrinkled, and tuberculated. It was particularly coarse and corrugated in the neighbourhood of the knee and elbow-joints, each of which was generally occupied by a cluster of tubercles, covered by a blackish grey scab. In one case, the skin of the legs, ankles and feet, was of a clay-brown colour, hard, thickened, and sulcated, or divided into numerous, irregular compartments, by deep fissures, from which oozed out occasionally an offensive discharge; in another were several large indolent sores on both legs.

The palms of the hands were seldom tuberculated, but had a dry, smooth, shrivelled appearance, as if the fat had been absorbed from under the skin. The backs of the hands, and more particularly of the fingers, were swollen, thickened, flabby, and beset with oblong tubercles, impeding the motion of the joints. The nails were coarse, fluted, and adunque. The feet were sometimes œdematous, but seldom much tuberculated. One patient had lost four toes of the right foot, excepting a single phalanx, which three of them still possessed; and another had lost two phalanges of the little finger; but these were the only examples of mutilation in any part of the body. In one case, the terminal bone of the great toe was exposed and dry; in another, there was a circumscribed, gangrenous spot, on the fourth toe; and, in

most of the cases, there were open, indolent sores, on the backs of the fingers, the bend of the ankle joints, the soles of the feet, the points of, between, or under the toes; sometimes superficial, and of a red colour; at others foul, discharging little, surrounded with hard, irregular edges, or overgrown by morbid cuticle.

The parts affected with the disease were benumbed, or, as the patients sometimes expressed it, "asleep," but they had never entirely lost their sensibility.

The hair was always in natural quantity on the head; perhaps slightly diminished in the axilla, on the beard, and pubes; rather thin and short on the edges of the eyelids; and almost, or entirely, wanting on the eyebrows.

The pulse was generally weak, and above a 100 in a minute. The appetite was good, tongue clean, and bowels regular.

In all the cases excepting one, the existence of the femoral tumour, discovered by Dr. Adam in patients affected with elephantiasis in Madeira, was distinctly ascertained. It was occasionally found on one side only; but more generally in both, a few inches below Poupart's ligament, of an oblong form, and sometimes uneven surface (as if arising from the union of two enlarged glands), from two to three inches in length, when largest, and moveable, under the skin, as well as over the subjacent parts. At intervals, of from one to three or four months, these swellings were subject to attacks of acute inflammation, preceded by a fit of shivering, and accompanied with smart febrile symptoms, which lasted two or three days, and then subsided, leaving the tumour nearly as before. Sometimes the gland of one side, sometimes that of another suffered; but never both, during the same attack. In one of the patients, a fine mulatto boy, in his 13th year, there were two cicatrices in the left groin, and two others a little lower down, on the front of the thigh. The abscesses, of which these were the result, had begun to form about nine months before I saw him, had broken spontaneously, and discharged matter three months before they closed. Previously to their appearance, he had been subject to the usual attacks of fever and of inflammation, in one or other of the femoral tumours, (which still existed in both sides,) but had been exempted from these attacks ever since.

The wasting of the genitals, described by Dr. Adam, had not taken place in a single individual whom I examined; the testicles in males, and the breasts in females, being constantly of their natural size. With regard to the functions of these

organs, neither the wonderful salacity ascribed to the miserable victims of this loathsome disease by some authors, nor the utter extinction of the venereal appetite, said to characterize them by others, existed in any case. One of the female patients, who had been affected with the disease only two years and a half, affirmed, that, though she had ceased to menstruate from its commencement, or to experience her former sexual propensities, she had yet suffered a miscarriage about 12 months before I saw her, and continued to cohabit with the person by whom she was kept. Another was the mother of two young children, one of whom I saw at her breast: she cohabited with a black, but received him less frequently than before. The two remaining female patients had lived for some years in a state of celibacy; but they menstruated regularly, and both unequivocally affirmed that their sexual desires were not extinct. Of the male patients, one had not attained the age of puberty: another stated that he had abstained entirely from venereal pleasures for the preceding twelve months; assigning as his only reason a conviction, that such indulgences were sure to exasperate the disease. The last asserted that his sexual propensities were exactly the same as they had been previously to the commencement of the disease, and that he indulged them occasionally.

One of the patients, as has already been remarked, was in his 13th year, and the disease had existed in him six years. The ages of the other patients lay betwixt 23 and 50, and in none of them had the disease commenced before puberty. Three were Mozambique slaves, who had left their native country at an early period of life, and could give no satisfactory account of their parentage. The remaining four were coloured natives of the Isle of France. One of these had lost her mother in her youth, and never known her father; but had brothers and sisters in perfect health. The next two stood in the relation of mother and daughter. The husband of the former had been dead eight or nine years; he had long been afflicted with palsy and dropsy, to which, only two years before he died, was superadded elephantiasis. Her daughter was attacked about the time of her husband's death; she herself, about two years after; and one of her sons had since fallen a victim to the disease. Her father was a Frenchman, her mother and maternal grandfather Creoles, and none of them was ever affected. The last patient appeared to have inherited the predisposition from the family of his maternal grandmother, who was never attacked herself, but who lost

two sisters and three nieces by the disease. None of his other relations, for three generations back, were ever known to have been affected. I saw his mother, with three other children, in the best health. She and her mother were Creoles, her grandparents Europeans.

One of the patients could not tell how many years the disease had existed. Another had been affected two years and a half; all the rest from six to nine years.

It is currently believed in the Isle of France, that Diego Garcia possesses a specific cure for elephantiasis; and there is a law empowering the governor to transport thither persons labouring under that disease. This law was probably enacted for the protection of the community from a pestilent contagion (as it was once universally supposed to be), rather than with any hope of curing the sick. But whatever may have been its origin, it is now very rarely enforced. The cure is generally ascribed to the use of turtle, which is very abundant in Diego Garcia, and on which the patients are said not only to feed almost exclusively, but to drink the blood warm from the body of the dying animal. The cure is never permanent, the disease always appearing again soon after the patient's return to the Isle of France.*

There are several other diseases incident to the natives of tropical climates, which have been generally considered as more or less related to, and sometimes perhaps confounded with, the tubercular elephantiasis. Of five cases which fell under my observation in the Isle of France, one approached more nearly to the leuce,† as characterised by Dr. Bateman,

* This mode of treatment is directly opposed to the dietetic rules laid down by Dr. Hillary in this disease. Patients, he says, "must religiously abstain from all swine's flesh, and all fat meats, and every thing that is oily, fat, or greasy, either in sauces or otherways; and that not only during the time they are under this course of medicines, but for many years after." *Diseases of Barbadoes*, 2d ed. p. 332.

† Dr. Bateman believed this to be the Hebrew leprosy—a disease of which Moses (*Leviticus* xiii) describes six distinct forms, rendering the individuals affected unclean, and requiring seclusion from society. Three of these were confined to the scalp and beard (ver. 29 to 37, and 42 to 44), and three appear to have attacked indiscriminately any part of the skin. Of the forms last mentioned, a bright white colour was common to all the three; but the first was characterised by the spot affected being "deeper in sight than the skin," and having the natural colour of its hair changed to white (ver. 2, 3, and 18 to 20); the second by the absence of these distinctive marks, by the spot or scab assuming in its progress a dark colour, and spreading, at a later period, "much abroad in the skin" (ver. 4 to 8, 18, 19, 21, 22, 26 to 28); and the third by the white colour, extending over the whole skin from head to foot, and terminating in, or giving forth, excrescences of "raw flesh" (ver. 12 to 17). It is evident that none of these

than to any other disease of which I remember to have seen an account. Two were probably examples of the "leprosy of the joints," described by Dr. Hillary in his work on the Diseases of Barbadoes, and more lately by Mr. Robinson (who proposes to call it *elephantiasis anaisthetos*) in the tenth volume of the Medico-Chirurgical Transactions. The remaining two were examples of the Barbadoes leg, or the Bucnemia tropica of Dr. Good.

The first of these affections occurred in a negress of Madagascar, thirty-five years of age. The disease consisted in large, circumscribed, irregular patches of discoloured and insensible skin, extending over nearly the whole body, the only parts exempted being the face, right fore-arms, and legs. The diseased was not perceptibly raised above the level of the healthy skin, but simply of a lighter or pale whitish colour. It might be pinched or pricked with impunity; but the patient complained of a most troublesome sensation of itching and prickling; and the friction employed to relieve this symptom occasionally brought out blisters, terminating in superficial ulcers, of which the scars were to be seen on the elbows, hips, and other parts of the limbs. These scars generally occupied parts indistinctly marked by the disease, though, on examining them attentively, discoloration could still be traced. There were two blisters on the palm of the hand. There were no tubercles on any part of the body, and no vestige of a swollen gland in either thigh. The hair was rather thin on the eyebrows; in natural quantity in other parts. Pulse 106 (in erect posture, and perhaps agitated), appetite

modifications possesses the characters ascribed to leuce by Dr. Bateman (Synopsis of Cutaneous Diseases, note on lepra alphoides), though the first agrees very closely with the account of that disease delivered by Celsus (de Medicina, lib. V, cap. 19). If, however, the first form be referred to in verses 10, 11, and the first and second in verses 24 to 27, (of which, from the context, I think there can be no doubt,) the advanced stage of the first and second, as well as of the third, was distinguished by excrescences of "quick raw flesh;" and, were the disease described by Celsus the same as any one of them, surely so striking a symptom would not have been omitted, even in his concise description. The occasional, if not invariable, occurrence of this symptom, during the progress of the disease, lends much probability to the opinion of those writers, who consider the Hebrew leprosy as identical with the yaws of modern times. Dr. Good, on the contrary, describes it as a scaly disease, synonymous with the Grecian leprosy; and divides it into three varieties, corresponding with the three species into which vitiligo is divided by Celsus. In regarding the leuce as a scaly disease, denominated, in his Nosological System, *Lepriasis candida*, Dr. Good differs from Dr. Bateman; while he agrees with him in thinking it a variety of the Hebrew leprosy. See a learned disquisition on this subject, in his Study of Medicine, Vol. IV, p. 574.

good, tongue clean, bowels regular. She had two healthy children, the first about nine, and the second about six years old. Her lover visited her occasionally, but she professed perfect indifference to sexual pleasures. The disease had existed about nine years. Her father had a single white patch on the buttock; her mother nothing of the kind. But for the insensibility with which the discoloration was accompanied, this case would have corresponded to the *epichrosis poecilia*, or pye-balled skin of Dr. Good.

Of the two patients affected with the "leprosy of the joints," one had lost the great and small toe of the left foot, and either one or two phalanges of each thumb, and of every finger of both hands. Three of the fingers retained their nails, after the separation of their terminal bones.* The left foot was about one-fourth shorter than the right, and so much swollen that its bones could not be distinguished. The joints of several of the fingers were bent to right angles. Most of the mutilated parts were cicatrized; but there remained a minute ulcer, on the stump of the right thumb; another—deep, circular, offensive—under the ball of the great toe; and a third, about three inches in length, but clean and superficial, on the sole of the left foot. There were no tubercles on any part of the body; the skin was perfectly sensible, and of natural appearance, excepting on the toes, where it was harsh, dry, and hardened by cicatrices. Hair in every situation in proper quantity. Pulse 76, and very weak, appetite good, bowels regular. There was an evident fulness and an enlarged gland in the upper and inner part of the left thigh, and a very slight fulness also on the right. He was subject to attacks of pain and increased swelling of these glands, accompanied by febrile symptoms, and the breaking out afresh of the ulcers on his toes. His generative organs and functions appeared to be perfectly natural; but he had not been able to persuade any negress to cohabit with him for the preceding four years. The disease had existed before the

* In one of the cases of tubercular elephantiasis also, the nail of the great toe remained attached, in its perfect state, to the proximal, after the separation of the distal phalanx. From these facts, and from the mutilated parts being so often found cicatrized, may we not infer, that the death of the bone is the first pathological change which takes place in this disease; that ulceration of the soft parts is only a secondary action, instituted by nature to get rid of a foreign body; and that the restorative powers of the parts, though always too feeble to renew the bone, as in ordinary cases of necrosis, are in general sufficiently active to form a healthy cicatrix, unless another bone dies, and requires to be thrown off before this can be accomplished?

English came to the Island (12 years). He was a Mozambique black, 35 years old, and knew nothing about his relations.

The other case of this disease occurred also in a native of Mozambique, about 25 years of age. The patient had lost all the toes of both feet; the middle phalanx of the right fore, and of both little fingers; and either one or two of the terminal phalanges of every other finger, and of each thumb. The extremities of all the stumps were slightly enlarged, and most of them exhibited a distinct cicatrix, drawn a little forwards, probably by the action of the flexor muscles. On both thumbs, and on one or two of the fingers, there was a small, hard, horny projection, in place of a nail. The fingers, which had lost the middle phalanx, had their proper nail remaining; the deficient bones appeared to have been thrown off at their posterior surface; and the first and last phalanges were ankylosed nearly at right angles. Three small ulcers on the left foot, nearly covered by thickened cuticle, were discovered by their fetid discharge. There were a few minute *pimples* on the face; but no *tubercles* on any part of the body. The uvula was short and slender; on each side of the tongue near its root, there was a rough, irregular, slightly raised, circumscribed patch, resembling two tubercles coalescing. The skin of the extremities was thickened, indurated, scaly, dry, and shrivelled, particularly about the knees and elbows, not adhering to the subjacent parts; and, on the back of the arms and thighs, exhibiting an appearance like numerous small cicatrices. On the hips and loins were several old scars, which he said were whip-marks. About three inches below Poupart's ligament, on each side, there was an oblong swelling, running down the inside of the thigh, about two inches long and one broad. Testicles rather small. He had sometimes, but very rarely, sexual desire. Hair in natural quantity; pulse 104, and very weak; had been twelve years in the island, and remembered nothing of his parents. As he had lost his fingers and toes at least seven years before I saw him, and had only three small indolent sores on one of his feet, this may be considered an example of recovery from the disease.

The discoloration and insensibility of the skin, described by Dr. Hillary and Mr. Robinson, as preceding the loss of the joints, existed in neither of these cases, at the time they were examined. On the other hand, these writers take no notice of the enlarged gland, discovered in them both, at the upper and inner part of the thigh. This enlarged gland, subject to periodical attacks of acute inflammation, accompanied by fe-

ver and aggravation of their respective symptoms, is common to the tubercular elephantiasis, the Barbadoes leg, and the "leprosy of the joints;" and furnishes, I believe, the only point of resemblance betwixt these three diseases.

The two cases of Barbadoes leg differed in no respect from that disease as usually described; and it is unnecessary to introduce them here.

I have the honour to be, Sir, your most obedient
humble servant,
J. KINNIS, M. D.
Fort Pitt, Chatham, }
24th April, 1824. }
To Sir James M'Grigor, Director General, &c.

ART. VII. *Cases of Small-Pox after Vaccination; with Remarks.* By JAMES HARDY, Esq. Member of the Royal College of Surgeons, London; and Member of the Sheffield Medical and Surgical Society.*

THE occurrence of small-pox after vaccination is a subject which, from its importance, has attracted the attention, not only of the medical profession, but of the world in general; and, although the subject has been treated in a very copious and scientific manner, it is far from being exhausted.

There exists in the public mind a very great difference of opinion respecting the propriety or efficacy of vaccination: indeed, the opinions of members of the medical profession are far from being unanimous on the subject; and, whilst that is the case, there is little prospect of the public mind becoming so. Under these circumstances, I think it the duty of every one to communicate such facts as may have fallen under his observation, which may have a tendency to elucidate the subject.

Having lately had the fortune to meet with several cases of this disease, it has induced me to choose this as the subject of my paper. Indiscriminate or extravagant praise, although it may temporarily succeed in establishing a remedy, will, unless it be founded in truth, be sure to be detected in the end, and injure the cause it was intended to uphold. Although, perhaps, a great majority of the profession (and amongst which I must be allowed to rank myself) advocates the cause of vaccination, yet I do not conceive the subject established on such an immutable basis as to preclude any

* From the London Medical and Physical Journal.

change of opinion. It is justly remarked by Dr. Gregory, in a valuable paper which appears in the last volume of the *Medico-Chirurgical Transactions*, that these unpleasant occurrences are on the increase, and no certainty exists that they have yet reached their maximum. I have for a long time wished to satisfy myself, whether vaccination is capable of affording different degrees of protection in the same subject. Dr. Gregory, if I understand him correctly, unhesitatingly decided in the affirmative. Undoubtedly, we witness occasionally after vaccination, every degree which small-pox is capable of exhibiting; yet how are we to decide whether this be owing to the degrees of protection afforded, or to peculiarity of constitution in the patient? Vaccination may have gone through its course in perfection in both cases, not only in appearance, but in reality; it may have produced the greatest effect which it is capable of producing, and yet, in some constitutions, not be a preventive of small-pox.

Most writers, who have treated the subject, lay great stress upon the appearance of the cicatrix: as far as my experience enables me to judge, much reliance is not to be placed upon this circumstance. I have witnessed the disease in nearly every degree, under almost every appearance of the cicatrix, and I am inclined to think that, in general, when vaccination produces a pustule containing virus capable of reproducing the same disease, it has effected all which it is capable of effecting.

CASE I. March 3, 1824.—B. M. aged thirteen years. She has been vaccinated; the cicatrix was distinct, about middle size, and slightly cellular. She had very high fever, with delirium; the eruption soon became vesicular, and became pustular about the seventh or eighth day of the disease: it was very numerous on the arms, but moderate on the face and body. On the ninth day, they began to decline very rapidly, and the fever had quite subsided. On the sixth, seventh, and eighth days, there was considerable swelling. On the thirteenth day, I found her playing in the street. The pocks had almost all disappeared, and there was no secondary fever.

CASE II. March 7, 1824.—M. aged one year, was vaccinated at the infirmary, Sheffield, about four months ago: the pustules (two) were very much inflamed, and sore for a long time; in fact, they are only just got well: they suppurated several times; they are now of a moderate, not large size,—not cellular. The disease was very mild in this case; the eruption was small, and not numerous, except about the

knees and one or two other places : they all died away about the third or fourth day. It was attended by very little fever.

CASE III. March 14, 1824.—G. about three years of age, was vaccinated at the infirmary about a year ago : the cicatrix is of the common size, rather faint ; and his parents state that he had a very fine pock, which went through the regular course. He is now under the influence of small-pox (the ninth day) : the pustules are very numerous, though generally distinct, and they do not appear to be at all modified. The fever is, perhaps, rather less than might be expected.

April 2.—The pox continued quite as long as in the natural disease.

CASE IV. March 13, 1824.—M. fifteen years of age, sister to the subject of Case II., has been vaccinated : cicatrix middle size, faint.

21st.—She has had the disease very slightly : the pustules exceedingly small, not numerous, and disappeared in four or five days. The general indisposition was but slight.

CASE V. March 20, 1824.—B. nine years of age, sister to the subject of Case I. : cicatrix similar to Case IV. ; considerable fever ; the pustules very few and small.

26th.—She was well in a few days.

CASE VI. April 2, 1824.—D. H., betwixt two and three years of age, has been vaccinated, and there are two distinct moderate-sized cicatrices. An eruption of small-pox came out on the 27th, 28th, and 29th of March, numerous, but distinct : they are rather smaller than in the natural disease, but appear to be running through the regular stages. The fever was very high, and the patient died on the 10th of April.

There have been many cases of small-pox in unprotected children, in the immediate neighbourhood of this case and of case third ; and yet it is a singular fact, that these two cases were more severe than any of the others ; a circumstance which, it is natural to suppose, would have a tendency to prejudice the minds of those acquainted with it against vaccination.

CASE VII. April 1824.—L. W., nine years of age, was vaccinated at the Infirmary, when an infant : there were two distinct cicatrices on the arm. The eruption was moderate, and began to decline in about eight days.—A sister of the above, three years old, and who was unprotected, received the small-pox infection from her brother, and had the disease rather mildly.

CASE VIII. May, 1824.—L. I., a brother to the subject of Case VII., was vaccinated by a woman in the neighbourhood: has a distinct and cellular cicatrix. He had considerable fever, and a slight eruption, for a day or two.

CASE IX. March 17, 1824.—Mrs. F., twenty-six years of age, had the small-pox naturally when a child, and some of the cicatrices are very distinct. Fever commenced on the 14th, is very violent, and she has had a convulsive fit to-day, and is sometimes delirious. An eruption, similar to small-pox, is making its appearance.

19th.—The eruption has made the usual progress, is not very numerous, and the fever is considerably abated. The skin surrounding the pocks is, perhaps, more inflamed than usual.

25th.—The disease appears to be scarcely, if at all, modified.

CASE X. May 17, 1824.—Samuel F., three years old, son to Mrs. F., was vaccinated at the infirmary this day week; has had a fit to-day, with symptoms similar to his mother's, with an eruption. The vaccine vesicles are small, and appear to be not at maturity.

19th.—He is better: the eruption is more numerous than that of his mother.

25th.—There appears to be no difference between this disease and natural small-pox.

CASE XI. May 17, 1824.—F., another child of Mrs. F., four months old, was vaccinated at the infirmary this day week: has slight fever, and a trifling eruption. The vaccine vesicles are arrested in their progress; they appear as they usually do on the fourth or fifth day.

25th.—The eruption never came to maturity, but remained small and shrivelled, with an increase of fever. The child died this morning.

CASE XII. May 26, 1824.—L. E., seven years of age, sister to the subject of Case VII, &c. She was vaccinated at the infirmary when one year old: there is a fair and distinct cicatrix on the arm. She is now very full of small-pox: they came out on the 19th, and appear to be unmodified; they are of the distinct kind, but very numerous.

CASE XIII. June 5, 1824.—S., aged three years, has been vaccinated at the infirmary; has a brother and a neighbour labouring under small-pox. An eruption came out this morning.

12th.—Disappeared in a few days.

I saw another case at the same time, closely resembling the above ; and another since.

Dr. Gregory says, that " small-pox after vaccination unquestionably prevails in particular families, showing that in them there exists some peculiar susceptibility of the variolous poison. Various instances of the kind have fallen under my own immediate observation."

It will be perceived, from the cases which I have related, that the same circumstances occurred to me ; but, in my opinion, the circumstance of exposure is a more probable explanation of the fact than the one given by Dr. Gregory ; particularly as the cases given by him in illustration, as well as those related by me, occurred nearly at the same time, and in subjects of very different ages.

Sheffield, June 16th, 1824.

ART. VIII. *Case of Spontaneous Evolution of the Fœtus.*

By ROBERT BROWN, Esq. Preston ; Fellow of the Royal College of Surgeons, &c. London.*

MRS. THOMAS T., ætatis twenty-six, of a constitution moderately strong, the mother of three children, between seven and eight months advanced in pregnancy ; on Saturday evening, June 26th, was severely shaken whilst returning in a coach from a visit at a distance, and also very much distressed in her mind from some domestic cause. On the following day, she experienced trifling pains in the belly and loins, which continued progressively to increase. I was called to her at half-past six o'clock this morning (June 28, 1824). The pains were strong and urgent. I directed the patient immediately to lie down in the usual position on the bed. On examination per vaginam, I found the membranes very full and tense, and acting strongly against the os externum. During the second pain, I accidentally and unintentionally ruptured them ; when a copious discharge of liquor amnii took place. The pains from this time became very trifling and long distant ; and the discharge became hæmorrhagic, and continued to be poured off in large quantity, both during and in the absence of pain, for about an hour and a half. On extending my search for the cause of the sanguineous eva-

* From the *London Medical and Physical Journal*.

cuation, I found the placenta (as I previously conjectured) separated from its original place of attachment, occupying one edge of the sacral portion of the os uteri, at the superior aperture of the pelvis; and which I could only ascertain and arrive at by first breaking through the large clots of coagulated blood, which filled up the hollow of the sacrum, &c.

After many fruitless attempts to discover the presenting part of the child, I at length felt the right hand of the fœtus in the middle of the right ileo-pectineal margin. The os uteri was only so much dilated as to admit my hand to the knuckle, upon which it acted most painfully; the patient complaining sometimes of great pain in the loins, but of still greater in the abdomen. In the interval of the pains, I endeavoured to pass my hand, so as to bring down one or both feet of the fœtus; but, after giving the patient about three ordinary-sized tea-spoonfuls of tinct. opii, at twice, and four hours deliberate and persevering attempt, I could never reach further than the ileum of the child, such was the spasmodic action which the uterus manifested. At times, however, during my endeavours to turn the child, a surprising degree of dilatation took place at the cervix and lower part of the uterus, whilst the upper firmly encircled the body of the fœtus, rendering all attempts to reach the feet, for some time at least, both futile and dangerous.

Having employed all the tinct. opii which I brought with me, and fearing to do mischief by continuing the attempt to deliver my patient under the existing circumstances, I set off home for more; but, on the way, called upon my friend, Dr. Moore, to borrow some, and invited him to accompany me. As we passed out at his door, a messenger came running to send me back. When I arrived, an attendant was officiating. The breech and half the body of a dead female child were protruding at the os externum; and a pain soon following, the whole was expelled, preceded (as we were informed) by a large mass of coagulated blood. Immediately on separating the child, the placenta was found low down in the vagina, and was speedily, and with the greatest ease, removed.

Evolution of the fœtus was in this case a most fortunate, but a very unexpected and agreeable, issue: the extremely violent and long-continued spasmodic action of the uterus rendered the effort to turn both unavailing and perilous.

On withdrawing my hand from the uterine cavity, the patient appeared disposed to sleep, arising, probably, from the quantity of laudanum given; which also was, no doubt, favourable to the change which soon followed, as she only suf-

mation.—Salines and Dover's powder were prescribed, with a saline cathartic.

Thursday.—Pain somewhat increased on pressure, and the symptoms more inflammatory.—Blood was extracted from the arm to twenty-four ounces, and the salines and anodyne continued.

Friday.—Symptoms aggravated.—Twenty leeches were applied to the abdomen; blood abstracted from the arm to sixteen ounces; and the remedies continued.

Saturday.—Pain less; abdomen less tense, but still more so than natural; the blood highly cupped and buffy.—I bled again from the arm to twelve ounces; applied twelve leeches to the seat of pain; and continued the saline, without the Dover's powder.

Sunday.—The abdomen still very tense and painful; the tongue dry; respiration laborious. The blood equally inflammatory with that drawn on the preceding day.—I bled again from the arm to twelve ounces, *ad deliquium*; applied twelve leeches to the abdomen; and prescribed effervescing salines.

Monday.—Pulse 130, small, hard, and tremulous; pain increased; milk in the breasts totally disappeared, and the mammæ become quite flabby; countenance cadaverous, eyes sunken; lochia ceased altogether; the respiration hurried and anxious; pain extending down the thigh.—Twelve leeches were applied to the abdomen; a blister to the ileum; and the salines, with Dover's powder, resumed.

Tuesday.—Was sent for in great haste, supposing my patient to be *in articulo mortis*. On arriving, she had just recovered from a severe rigor: though excessively low and dejected, her countenance had assumed a more favourable aspect; she had had some refreshing sleep; her pulse about 120, and more regular; her thirst had diminished; tongue cleaner, and less dry; could bear pressure better, and had been lying on the right side for about three hours. The blister had risen well, and the pain in the thigh had nearly abated. I continued the diaphoretic saline; applied a second blister to the sacrum; and allowed her a more generous diet.

Wednesday.—The bowels costive; had not acted since Tuesday forenoon.—Ordered a common cathartic enema.

Thursday.—Much better in general, although the pain had a little increased. The bowels had twice freely acted, from the injection.—I applied six leeches to the groin, and continued the saline.

From this time my patient became gradually convalescent, and in about six months after, on my meeting her, she told me she had again become pregnant, and feared the result; the more particularly so, as she was obliged to leave London.

Remarks.—The attempt to recall labour-pains was injudicious, the life of the mother not being involved. Were the funis similarly situated in another instance, when endeavouring to bring down the feet, I should endeavour to hitch it on some member of the fœtus, to prevent fatal pressure on it, and to decrease the difficulty of extraction. Under similar circumstances, again, I would not be satisfied with one foot, as, when two are gained, which is done with comparatively as little pain to the mother, the fœtus is more speedily and readily expelled. In the subsequent treatment, I think much blood might have been spared, had blood to a larger amount been extracted at first, (*viz. ad deliquium.*) After the active inflammatory stage had subsided, the blisters gave evident relief. I think it but justice to add, that the circumstances of the patient were such as to preclude the possibility of a due attention to ventilation and cleanliness.

Cleveland-Court, St. James's-Place: July, 1824.

ART. X. *Case of Chorea, or Dance of St. Vitus, cured by the Carbonate of Iron.* By C. F. VANDEBURGH, M. D. Liverpool.*

ANN LINDON, an interesting girl of fourteen years of age, was seized (agreeably to her mother's description, while engaged in her usual occupation of selling vegetables in the New Market) with convulsive motions in the left leg and arm, to a degree that prevented her from walking. She dragged the affected leg after her: neither could she lift her hand to her mouth, without frequent attempts before she succeeded. She has tried numerous medicines and nostrums for upwards of three weeks, without benefit, but gradually became worse.

On the 1st of April, she consulted me. I found her labouring under confirmed chorea, distortion of the muscles of the face, violent convulsive motions of the head and extremities, with total inability to walk, or bring any thing to the

* From the London Medical and Physical Journal.

mation.—Salines and Dover's powder were prescribed, with a saline cathartic.

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mouth; the eyes were in constant motion; attended with an involuntary discharge of urine, likewise of saliva from the mouth, with loss of articulation; the abdomen prominent; bowels costive; pulse natural; appetite good. The involuntary motions continue during sleep; the mind was also considerably impaired.

Practitioners differ greatly in the treatment of this disease, some being advocates for electricity, others for depletion; and nearly the whole range of the Pharmacopœia has been exhausted even, in some instances, without success. But it is not my intention to tire my readers with a lengthened detail of the various methods of practice already adopted. I endeavoured to conquer the disease by purgatives, so judiciously recommended by Dr. James Hamilton, and ordered the following mixture—*R. Magnesiæ Sulphat. ℥j. Infusi Rosæ ℥ij. Infusi Sennæ ℥iij. fiat mistura, cujus cochlearia tria magna quarta quaque hora sumantur*, with the intention of cleansing the primæ viæ of their acrid contents, and continued it for eight successive days. The patient had seldom less than four or five evacuations daily, with no other success than removing the prominency of the abdomen, and rendering the fæces perfectly natural.

The 9th April, I commenced giving half a drachm of ferri subcarbonas, four times a-day, in molasses; and, if the bowels were costive, a small wine-glassful of the cathartic medicine before mentioned.

On the 17th April, the convulsive motions of the lower extremities were less frequent; intellects much improved. Ordered the subcarbonate of iron to be increased to two scruples four times a-day, and the patient to be immersed in the river every morning; which, notwithstanding the coldness of the atmosphere, she appeared to enjoy.

On the 24th April, I perceived great amendment: the involuntary motion had subsided during sleep; the eyes and features became more natural; articulation improved; and, without help, she felt able to walk a short distance. The ferri subcarbonas and sea-bathing were continued.

The 4th May, the power of speech was perfectly regained; the involuntary motions nearly subdued. The same treatment was pursued, accompanied with as much exercise as possible; and, on the 12th May, had the satisfaction of seeing her perfectly restored, and able to attend to her former occupations.

Liverpool, 15th May, 1824.

P. S.—Agreeably to Mr. B. Hutchinson's, of Southwell, mode of treatment, (to whom great merit is due,) I have also the pleasure of communicating, that I have given the ferri sub-carbonas, in large doses, in two cases of tic douloureux. One, Mr. Potter, of Liverpool, who had suffered upwards of two years, (the complaint was perfectly removed in the space of a fortnight;) the other, Mr Samuel, of the same place, who had only suffered a short time.

REVIEWS.

Quidquid venerit obviam, loquamur
Morosa sine cogitatione.

MARTIAL.

ART. XI. *A Practical Treatise on Diseases of the Skin, &c. with original observations.* By SAMUEL PLUMBE, Member of the Royal College of Surgeons, London, pp. 392, 1824.

"And the leper, in whom the plague is, his clothes shall be rent and his head bare, and he shall put a covering upon" his lips, "and shall cry, unclean ! unclean !" *Leviticus, c. xiii, v. 45.*

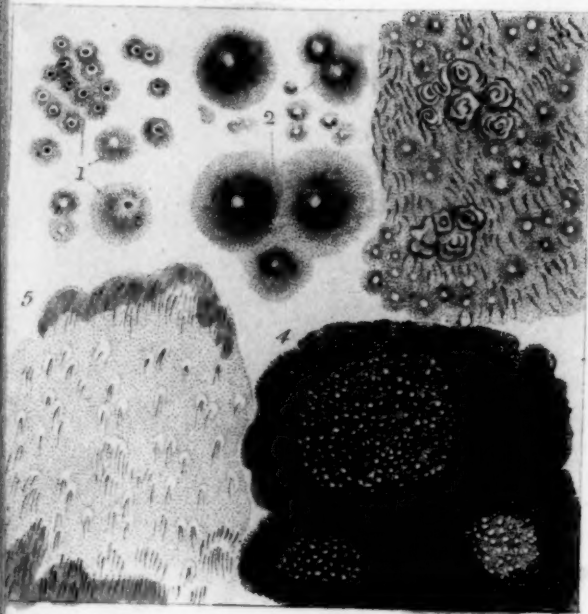
THE diseases of the skin are interesting in many points of view: in all ages, some of their forms have been regarded with detestation and horror, and their victims have been doomed to a melancholy exile pronounced by the fears, which the great evils of humanity, when certain and irremediable, never fail to excite. As they have claimed the attention of the great lawgivers of the earth, these feelings, transmitted for centuries, and strengthened by education, become peculiarly strong; and it is only by the influence of experience and observation, that they can be dissipated, and the sufferers regarded with sufficient attention to become the subjects of remedies. The idea of contagion too often destroys by desertion its miserable victims, or, by palsyng the hand of medicine, renders the disease, if chronic, incurable. Under leprosy, the Mosaic law comprehended sycosis (ulcers on the chin), tinea, and the real lepra:* the two former were ren-

* *Levit. c. xiii, v. 2, 29, &c.* a view, which, in the following pages, is shown to be consonant to recent observation;—these diseases are merely varieties of each other.

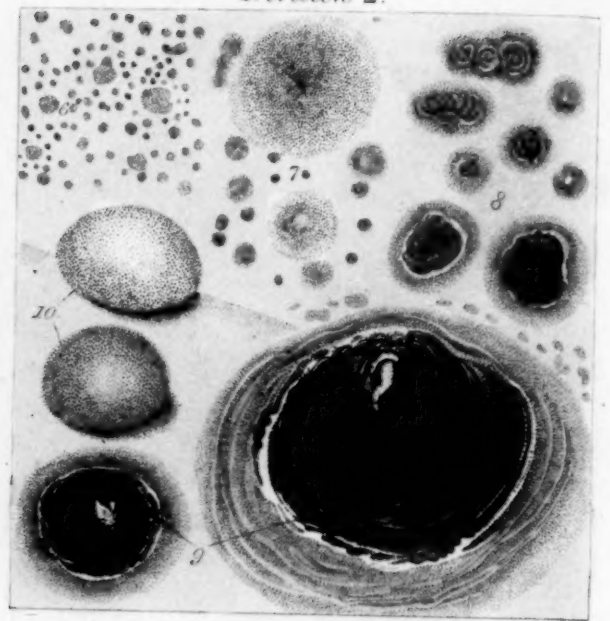
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CUTANEOUS DISEASES.

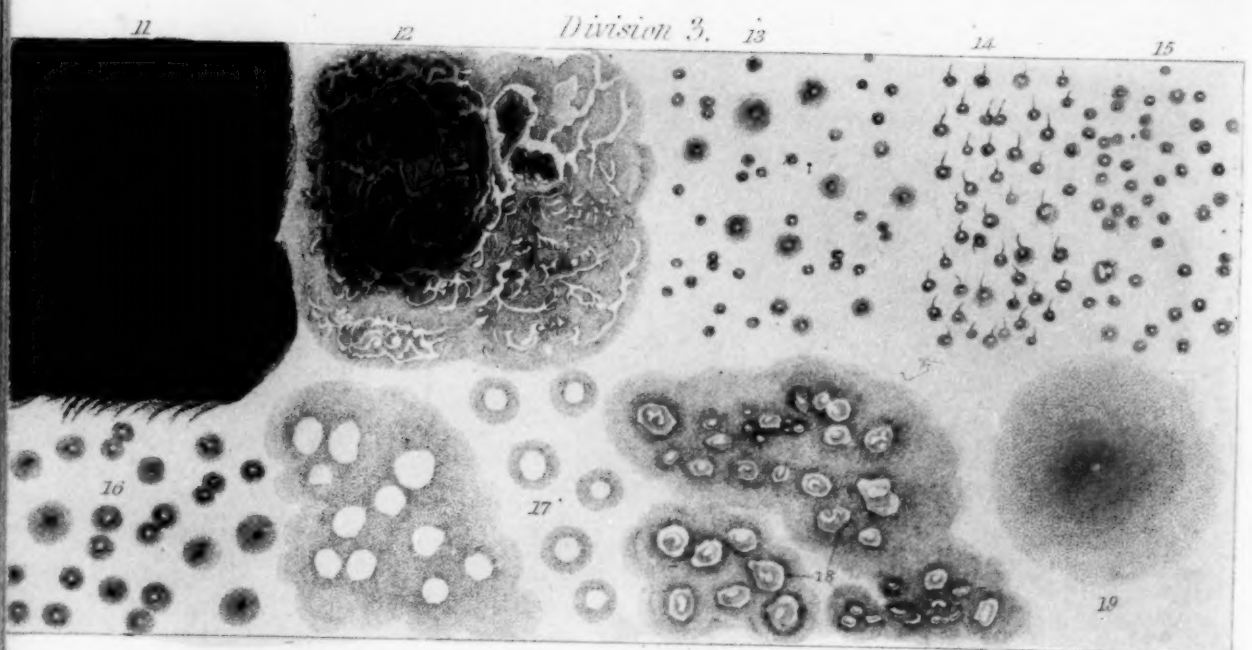
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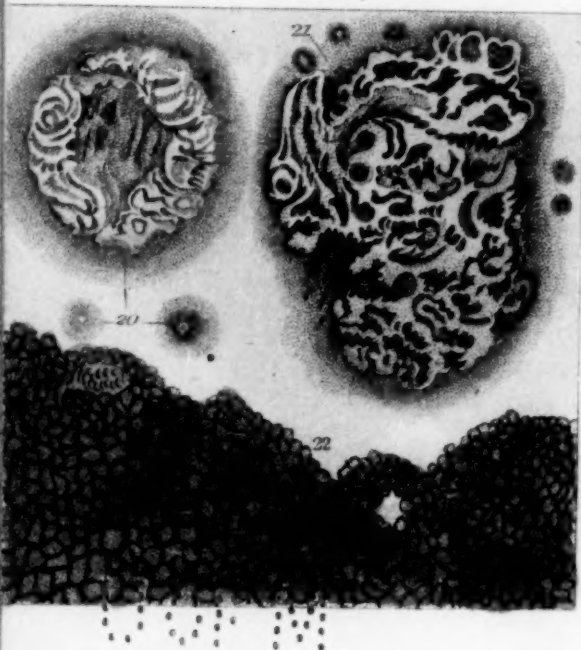
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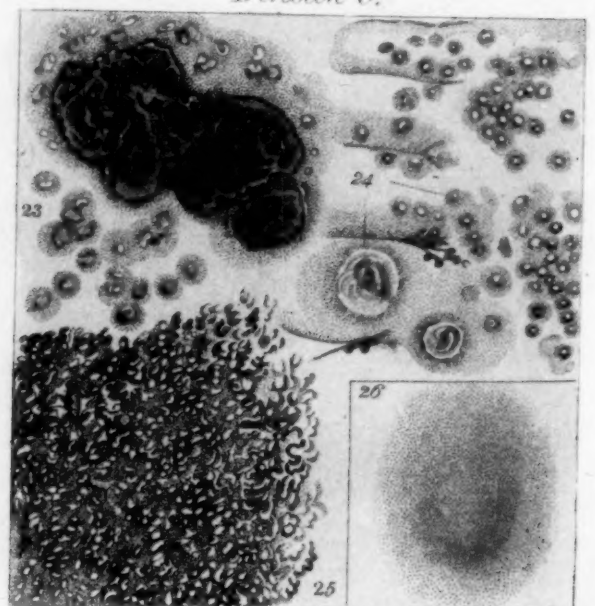
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Division 4.



Division 5.



Eng. by F. H. Lang

DESCRIPTION OF THE PLATE.

DIVISION I.

FIG. 1. The upper part of this cluster of figures is intended to represent the uninfamed follicles: the lower, the commencement and progress of inflammation, and its termination in the formation of matter. 2. The enlarged and indurated tubercles (*A. indurata*), with matter formed in their centre, which occur in bad constitutions. 3. Inflamed and suppurated follicles, forming sycosis on the beard. 4. The appearance of spots of *Porrigo scutulata*, where no fluid secretion or scab has been formed. 5. The partially desqued scab of long established cases of the latter, where scabs have been allowed to accumulate, when great irritation prevails, the remaining hairs isolated by pus.

DIVISION II.

FIG. 6. Petechia, or *Porrigo erysipelatosa*. 7. The earliest spots of *Purpura hemorrhagica*. 8. Different stages or degrees of the inflammation or eruption. 9. The circular scabs of *Impetigo*. The similarity of them to the two latter is rendered very distinct. 10. *Pompholyx*. The superior vesicle discoloured by the admixture of blood from the vessels of the surface.

DIVISION III.

FIG. 11. *Porrigo farosa*. 12. *P. larvalis*, both from cases of considerable standing. 13. The pimples of infants, some of them unattended by considerable inflammation; their representation in clusters connected by patches of inflamed skin (*S. intertrictus*, &c.) has been omitted. 14 and 15. The pimples of adults, termed *Lichen*; the first of these, as it sometimes occurs on the arms and other parts covered by the finer kind of hair, each hair occupying the centre of a pimple: the second as it appears on other parts. 16. The papules of *Prurigo*, the tips of some of them scratched off, leaving a partial little black, bloody scab on their apices. 17. Two of the commoner forms of *Urticaria*. 18. The pustules of *Impetigo* in an advanced and partly healed state. 19. The varicellous *Exanthema*.

DIVISION IV.

FIG. 20. The two inferior spots representing the first appearance of the spots of *Leprosy* before the first scale separates. The superior, large, round, and scaly; the disease in a spreading state. 21. *Psoriasis*. 22. An enlarged representation of the morbid and discoloured cuticle forming *Lichena*. The numberless fissures caused by the cracking of the hard dry substance, and dividing it into thousands of pieces, are well represented.

DIVISION V.

FIG. 23. The inferior portion exhibiting an enlarged view of the vesicles of *Impetigo*. The superior, the disease in an advanced stage, with the scab partially covering it. 24. The vesicles and enlarged pustules of the itch. 25. The appearance of the skin in *Rozacea* *obscure*. 26. The tubercle of *Furunculosis nodosum*.



DESCRIPTION OF THE PLATE.

DIVISION I.

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DIVISION II.

FIG. 6. Petechiæ, or *Purpura simplex*. 7. The enlarged spots of *Purpura hemorrhagica*. 8. Different stages or degrees of the Ecthymatous eruption. 9. The conical scabs of *Rupia*. The similarity of character between the two latter is rendered very distinct. 10. *Pompholyx*. The superior vesicle discoloured by the admixture of blood from the vessels of the surface.

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FIG. 11. *Porrigo favosa*. 12. *P. larvalis*, both from cases of considerable standing. 13. The pimples of infants, some of them surrounded by considerable inflammation; their representation in clusters connected by patches of inflamed skin (*S. intertinctus*, &c.) has been omitted. 14 and 15. The pimples of adults, termed *Lichen*; the first of these, as it sometimes occurs on the arms and other parts covered by the finer kind of hair, each hair occupying the centre of a pimple: the second as it appears on other parts. 16. The pimples of *Prurigo*, the tops of some of them scratched off, leaving a peculiar little, black, bloody scab on their apices. 17. Two of the commoner forms of *Urticaria*. 18. The vesicles of *Herpes* in an advanced and partly flaccid state. 19. The carbuncular Furuncle.

DIVISION IV.

FIG. 20. The two inferior spots representing the first appearance of the spots of *Lepra* before the first scale separates. The superior, large, round, and scaly; the disease in a spreading state. 21. *Psoriasis*. 22. An enlarged representation of the morbid and discoloured cuticle forming *Ichthyosis*. The numberless fissures caused by the cracking of this hard dry substance, and dividing it into thousands of pieces, are well represented.

DIVISION V.

FIG. 23. The inferior portion exhibiting an enlarged view of the vesicles of *Impetigo*. The superior, the disease in an advanced stage, with the scab partially covering it. 24. The vesicles and enlarged pustules of the itch. 25. The appearance of the skin in *Eczema mercuriale*. 26. The tubercle of *Erythema nodosum*.

[To face Page 58, Vol. VIII.]

dered incurable by exile from society, and the discovery of those means, which sometimes succeed in the latter, were prevented by the same punishment: indeed, from the most enlightened view of the subject, it would appear that government, which thus prevents their relief, has too often, in later ages, by neglecting to encourage industry and the arts, which contribute to individual health, happiness, and comfort, extended the worst forms of these maladies. This idea is not improbable, when we consider that the diseases of the skin originate from misery produced by the fatigue of hard labour, by a wretched diet, and by anxiety of mind to procure it, conjoined with uncleanness, from the neglect of ablution, the long use of the same clothing, and residence in filthy dwellings, composed of materials eliminating miasmata from decay: indeed, the leprosy (*pelagra*) which has of late years appeared among the peasants of the plains of Lombardy, and on the hills and vallies of the Alps, which border on that fertile region, is now referred, by accurate observers, to the influence of horrible physical evils, produced by vicious forms of government; and, when we reflect that every part of Europe abounded with many thousands of persons thus afflicted, a few centuries ago; that they have gradually disappeared as civilization increased, and that they are still numerous in Asia, where this amelioration has not taken place, it must be conceded that this view has some plausibility. The association of misery and poverty with diseases of the skin, is proverbially applied to some districts of the old world even at the present day: every where they are more or less united. In this country, where the poorer classes enjoy not merely the necessaries, but many of the luxuries of life, these maladies are comparatively rare; and its highly aggravated form, *lepra*, so common among the Jews and in the dark ages of later nations, is here almost unknown. It does, however, appear in its most aggravated forms. A case, attended with deep and extensive ulcerations, occurred in the practice of Dr. Hiester of Reading, within a few years. The patient ultimately fell a victim to the malady, though he had sought in every part of the state, in vain, for relief. In his travels, he had seen and heard of six cases, which were all attended with deep ulcerations, and terminated fatally. As the disease continued in this patient many years, and his communication with the neighbouring districts was extensive, the above account gives an accurate view of the occurrence of the leprosy in the middle latitudes of North America.

The more simple and manageable varieties of the diseases

of the skin, here, as in Europe, frequently result from intemperance in eating and drinking; the application of dry powders to the skin, as in bakers, &c. of the alkalies in the use of soap, by washerwomen, often produces it.

In other instances, they appear sparsely over certain districts of country, distinguished by no peculiarity. It is then difficult to determine to what the disease is owing. Thus, in the counties adjoining Philadelphia, there is sometimes seen a scurfy disposition of the skin, with dark brown spots, situated beneath the cuticle. It is sometimes connected with liver disease, and is always, in the places where it originates, with difficulty cured; when the patient is removed it is more manageable. The scabies of Illinois exhibits some peculiarities;* its causes are unknown. The opinions with regard to the origin of these diseases from poisonous metallic matter in fish, appear to be disappearing. Urticaria is sometimes the result of improper food, particularly in young persons; upon the whole, with the exceptions above stated, the varieties of these diseases appear to bear the same aspect in this country as in the old world. Sometimes entirely local, they are derived from causes circumscribed in their operation, at others, as in purpura, they resemble typhus. The interval between these extremes is filled by diseases united by affinities more or less intimate. As they are the subject of this essay, it may be stated, that they are the fish-skin disease, dandriff, the various tetter, leprosy, and forms of prickly heat; the different species of itch, impetiginous and herpetic eruptions; pemphigus and its resembling diseases, the nettle rash, aphthæ, erysipelas; the boil, pimples in the face, and ulcers on the chin.

From the complicated character of the classification of diseases of the skin, and the detail produced by a minute subdivision of their species, even a moderate acquaintance with this perplexed and intricate subject, is obtained with difficulty. The work of Mr. Plumbe, the subject of the review, has cleared away somewhat of its obscurity; with a little attention to the farther simplification of its nomenclature, by the arrangement of its diseases according to their affinities, by the translation of its terms into English, where the language supplies them, by the reduction of their varieties into one common morbid pathological character, where it is possible, it appears to be as susceptible of clear and luminous views as any other subject in the range of medicine. To give a gene-

* See page 594, Vol. VII., Medical Recorder.

ral view of its present state is the object of this analysis.

It appears that the existence of the rete mucosum is denied by some celebrated anatomists of London; and its structure is reduced to two instead of three parts. The illustrious Malpighi discovered the rete mucosum, and many eminent anatomists, who have succeeded him, support its existence; Gordon and Lawrence, however, deny its existence in all the varieties of the human race, excepting the negro. The authority of the latter is much weakened by the circumstance that they attempt to prove a negative, the non-existence of a particular structure, rendering it questionable whether they do not demonstrate the inefficiency of their means, rather than the absence of the rete mucosum, particularly as its existence has been so long demonstrated. The editor of this Journal has frequently seen it after the application of blisters, which were suffered to remain without dressing for a considerable time; the serum swelled and distended the rete mucosum so that its existence was evident, and could be easily demonstrated.

As different varieties of scalled head are referred by M. Alibert to this membrane, it has therefore been particularly introduced by Mr. Plumbe, as important to the discussion: when we reflect, however, that these diseases affect the cutis vera with inflammation, and involve the cuticle, covering it with scurf, scabs, and ulcerations of various kinds, the anatomical question of the existence of the rete mucosum becomes of little importance, since its seat, occupied as it may, is necessarily involved in disease, the character and cure of which must be ultimately settled by observation alone, entirely independent of anatomy. The sebaceous follicles more properly claim attention, since a knowledge of their structure throws light on the treatment pursued in their diseases. Scattered over the face, neck, and breast, they give to the skin a smooth polish, when their secretion flows freely from their orifices, and when it hardens in them it communicates to the complexion a dingy hue, produced by numerous black points over its surface. By their irritation disease is produced, of which there are several varieties, which will be discussed in the following essay. Pimples have been considered as originating in inflammation of the papillæ on the surface of the skin; by the most powerful glasses, however, Mr. Plumbe could not discover their existence on the surface, generally the common seat of this form of disease, and as upon the organs of taste and touch, where papillæ unquestionably exist, no pimples are found, this pathological view is evidently erroneous.

The peculiar arrangement of the hair upon the head, our author considers as giving a distinct character to the diseases of this part. He states that the hair arises and receives its nourishment from the adipose structure below the skin, and passes like an extraneous body without receiving any vessels in its transit; giving great irritation, when it is inflamed in scalled head, thus rendering necessary its complete extraction before that disease can be cured. This view is untenable, for, as long as the hair itself is healthy, it cannot be considered as a foreign body: the practice founded upon it has also been shown, both in France, England, and this country, to be unnecessary, as the disease has frequently been cured without the extraction of the hair.

In addition to these diseases, the skin loses its colour by the administration of the nitrate of silver, which, when long given, changes it to a purple hue; darker on those parts exposed to the light, rendering it probable that the silver is deposited in the form of muriate, by the action of the muriate of soda, which decomposes it in the circulation. Its colour is changed by the effect of light, and remains there in consequence of its insolubility. Sulphur, when rubbed into the skin during the exhibition of mercury, unites with that metal, and also produces discoloration of the skin, which disappears on the discontinuance of the medicine. Violent mental impressions also change its colour from black to white, and the contrary.*

The diseases of the skin are either local or connected with the general system, and appear in spots, (*maculæ*,) or permanent discolorations of the skin, sometimes attended with change of texture, but without general disease; in scurf, (*fur-fura*,) or slight exfoliations of the cuticle, like bran; or, lastly, in scales, (*squamæ*,) larger laminæ, which, when still larger, are denominated crusts; there are other forms—pimples, (*papulæ*,) consisting of elevations of the cuticle, which, generally, do not suppurate, but terminate in scurf; pustules, which always form pus, and tubercles, which do so likewise, though slowly. They also appear in wheals, round protuberances like the mark of a whip, which do not contain fluids of any kind; in rashes, (*exanthemata*,) which consist of red and variously-figured patches, giving the sensation to the finger of an uneven surface, distributed irregularly over the body,

* Med. Repos. Dec. 1822. Med. and Physical Journal, Nov. 1819.—Plumbe.

with interstices of a natural colour and ending in scales. Small blisters, vesicles, (*vesiculæ*,) which, from the smallness of the quantity of fluid terminate in scurf; blebs, (*bullæ*,) or larger vesicles, containing a transparent watery fluid, and ending in scabs of various colours, produced by a mixture of pus, blood, &c. also form other varieties. These comprehend the whole range of the subject, and give a complete idea of the general divisions of Willan, namely: pimples, (*papulæ*,) rashes, (*exanthemata*,) blebs, (*bullæ*,) vesicles, (*vesiculæ*,) pustules, (*pustulæ*,) tubercles, (*tubercula*,) and spots, (*maculæ*,)

The world is much indebted to Dr. Willan for his general division, and the accuracy of his descriptions, particularly as they render definite our ideas on this complicated subject, and thus favour the communication of improvements in the mode of cure.

A late writer has suggested the idea, that the varieties of these diseases are referable to the various degrees of morbid action of the system in different subjects: this question, if it led to the improvement of our treatment, would be valuable; but as, under all opinions, whether hypothetical or demonstrated, which can be conceived or entertained upon this subject, an immense crowd of remedies have been necessary in difficult cases, we cannot see that any improvement has yet been effected by this mode of considering it. The state of the action of a part in disease can only be known by the symptoms and appearances it exhibits to the senses; and, therefore, to conclude that the morbid action is one, and only differing in degree, when all sensible proof leans to the contrary result, we think not very rational. Dr. Willan's plan of minutely describing the different species of disease, and ascertaining the precise remedy or plan proper to each, is the only proper mode of procedure.

To group them according to their natural resemblances, and place them before the practitioner in a simple and useful point of view, is the object of the following analytical sketch, in which the text and matter of the author are used, as is thought expedient.

The diseases of the skin are either local or connected with general diseases of the system. Commencing with its exterior, we first consider those which are the result of slightly increased action in the vessels, producing the cuticle.

Corns.

Corns are produced by pressure, and cured by removing it. *Cure.*—Loose shoes; softening the corn by applying equal portions of sulphuric acid and water to its substance, and defending it from pressure by strips of adhesive plaster united together and cut into a hole, so as to receive the corn. Layers of chamois leather, secured by adhesive plaster, answer better.*

Warts.

A wart is a thickening of the cuticle, produced by unknown causes. *Cure.*—A minute blister of cantharides, applied over the wart, and retained in this situation a day or two by adhesive plaster, softens it, so that it may be easily removed by the fingers or knife; lunar caustic, or a small portion of sulphuric acid, then applied, prevents its reappearance.† Other means are proposed: in general, removal by the knife, caustic, or the nitric acid, succeeds.

The Fish-skin Disease (Ichthyosis).

Sometimes the cuticle is affected with chronic inflammation, attended with heat and a gradual thickening of its substance, which grows dark, hard, and cracks like an old wart. This form is seated generally on the arms and legs, and is termed the fish-skin disease (ichthyosis). See plate, fig. 22. Its causes are unknown, and it appears generally to be entirely local. It sometimes, however, extends over the body, is hereditary, and appears shortly after birth. The exhibition of pitch, arsenic, and the application of ointments, frequent soaking the parts in warm water, recommended by Willan, were completely unsuccessful in the experience of Mr. Plumbe. With him, adhesive straps, applied as tightly as they could be borne over the diseased parts, covered with a bandage, and wet with the cold lotion, gradually effected a cure in two instances. This disease occurs in the Barbadoes leg (a form of elephantiasis), which has been usefully treated by pressure made by bandages. The horny excrescences of the skin also resemble it.‡ These excrescences are easily removed, and without danger, by the knife. Sometimes they arise from the cavity of en-

* Plumbe.

† *Id.*‡ *Id.*

cysted tumors on the scalp and over the spine ; it is then necessary to remove the cyst, otherwise the horn reappears.*

Dandriff (Pityriasis).

The scurf of the cuticle, or dandriff, produces, when it accumulates, slight ulcerations of the skin, which, in children, and sometimes in grown persons, becomes troublesome, by ending in scald head (porrigo). Dandriff sometimes succeeds great exertions, and is a proof of debility. Tonics and nourishing diet then relieve it. It is, however, generally a local disease, and is best cured by bathing morning and evening with a solution of xii. grs. of acetate of zinc, dissolved in ℥vi. of proof spirit, and the same quantity of water. It may be applied to the head with a soft sponge: if there is much itching of the skin, and the scales are large, it approaches to the dry or scaly tetter (psoriasis): the sulphurous vapour bath is then valuable. Cleanliness, by repeated ablutions, is, in general, the best remedy.† Lotions, containing muriatic acid in the quantity of ℥i. to half a pint of distilled water, or of two or three drachms of the liquor potassæ to the same quantity of water, are recommended by Willan, as also sea-bathing.‡ The varieties of this disease are pityriasis rubra, versicolor, capitis, confusa. As they as yet have not led to any peculiar treatment, it is therefore unnecessary to describe them.

The Leprosy (Lepra Vulgaris).

The symptoms of this disease often first appear in yellow, white, or reddish spots disposed here and there upon the skin, which sometimes becomes blackish, thickened, rugous, and unctuous; the patient looks full, without any scales or crusts upon his skin; his physiognomy, however, has something repulsive; his respiration is embarrassed, and his breath fætid.§ The local affection increases and is characterised by red, inflamed patches, producing scales without vesicles or pustules, unattended by pain or smarting.¶ At first the round red spots are elevated, and are about the size of a split pea; the skin of the part loses its natural flexibility; the surface of the spot becomes glossy, hard, and covered with a semitransparent smooth scale, which soon separates, and is followed by some roughness and irregularity on the

* Bateman.

† Plumbe.

‡ Bateman & Willan.

§ Dict. des Sciences Medicales, art. Lepre.

¶ See plate, fig. 20.

surface: a small prominence is observed in the centre of the scale, with a corresponding depression in the skin; and, if the scale has been separated with difficulty, a small speck of blood appears: neither the prominence, however, nor its corresponding depressions, are found in the scales which subsequently appear. The diseased spots enlarge in size and increase in number, till they gradually extend over the whole body. Pricking* is sometimes felt before the separation of the first scale, but never afterwards. Painful fissures and cracks exist in the skin, about the joints. The formation of the nails in some instances is not complete, and is attended with a fluid discharge at their roots: this occurrence, however, is rare in temperate latitudes. It appears, most commonly, where the bone is nearest to the surface; seldom, at first, on fleshy parts, as the calves of the legs; and, generally, on the two corresponding sides of the body at the same time, as upon both elbows, both knees, &c. A fact, which, we believe, shows its constitutional origin, though the state of the health is apparently not at all affected in most cases. In the West Indies, Dr. Monges, one of our most able practitioners, has informed me that the lobes of the ears, the upper lip, the parts between the eyelid and the eyebrows are first affected. Insensibility of the skin, even to the touch of a red hot iron, and the formation of a glutinous ropy pus also sometimes accompany it. This disease has been divided into the white (alphoides), and black (nigricans), varieties: the latter is the typhoid state of the disease, and is produced by fatigue, improper food, cold, damp, uncleanness, and other debilitating causes:† exposure to dry and light powdery substances sometimes produces the disease in its common form.‡ In one person, spices and alcohol; in another, copious draughts of cream were the causes of it. Idiosyncrasy evidently contributed in these instances.

This terrible disease frequently continues through life, and unfortunately, in its worst forms, little and too frequently no dependance is to be placed in medicine. Dr. Monges has informed me, that in Cayenne a surgeon was entrusted by the French government with a certain number of patients every year with a view to discover some mode of cure: every plan proved abortive. He believes that the disease is neither contagious nor hereditary in the West Indies.

It is undoubtedly true that it appears most frequently among the poor, yet it is also found in persons in comfortable cir-

* Plumbe.

† Willan & Bateman.

‡ Willan.

cumstances, particularly in females, when, in the opinion of Mr. Plumbe, the susceptibility to it is generally hereditary; as its subjects are so frequently incurable, it is consolatory to know that the tenderness of the cuticle, beneath the arm-pits and in the arms and hands, generally subsides as the patient advances in life.*

The Scaly Tetters (Psoriasis).

The leprosy sometimes assumes a milder form, distinguished by its ceasing and recurring at certain periods of the year; by the irregular distribution of the patches over the skin, which is more tender, more frequently divided by fissures than in lepra, and also attended with more decided symptoms of constitutional disorder. It is called Psoriasis, or the dry and scaly tetters. See plate, fig. 21. Of this disease, Willan has given fourteen species, distinguished only by the parts which they affect, as the palms of the hands, the lips, the nails, or the degree of violence of their symptoms.

On the Treatment of Lepra and Psoriasis.

With regard to the treatment of these diseases, as they sometimes affect and are affected by the state of the system, bleeding and purgatives have been recommended; these remedies are applicable only to cases where there exists an inflammatory diathesis. In the typhoid state (*lepra nigricans*) a regular plan of nutrition, diet, and moderate exercise, the mineral acids, sea bathing, with the bark, have succeeded completely. In general, however, it will be found, if the case be curable, that the following remedies are entitled to most confidence in the more violent form (*lepra*):

Mineral waters, particularly those of Bath, Barege, and Harrowgate,† externally, by showering, and also their internal use. The latter is cold and hydro-sulphurous.

The waters of Bath are saline and warm (92° to 94°), and, when first drawn, from 112° to 116° Fahrenheit.

Those of Barege are from 88° to 113° of Fahrenheit, and hydro-sulphurous.

Warm vapour baths, both of salt and common water, when they can be borne, have been useful. The aqua kali puri of the

* Plumbe.

† For the mode of preparing the Harrowgate water artificially, see the article Itch (*prurigo*), in this Essay.

London Dispensatory, in doses of twenty or thirty drops thrice a day—the arsenical solution—as internal remedies, have strong testimonies in their favour. The nitrous and muriatic acids are also recommended, though they are less effectual. The vinum ferri has also been given with advantage. The external and internal use of the solanum dulcamara, according to the plan of Dr. Creighton, has succeeded.* The sulphur bath is also said to be valuable. In the Isle of France, turtle soup, with excessive diaphoresis, excited by lying in the sand, effected a cure. Casal states, that butter, administered largely, has also cured it. A milk diet is frequently salutary in diseases of the skin. Larry, the great surgeon of the French army, cured it by the decoction of the burdock, (*arctium lappa*), and the herb patience, with the tincture of bark in the morning and in the evening, the syrup of sarsaparilla to excite perspiration, with camphor and opium to relieve pain. The golden sulphuret of antimony was also given as a sudorific, with the bitter extracts. Emollient applications and anodyne ointments were used to soften the crusts. Schilling recommends a decoction of the wood and roots of the tondin, a species of paulinia. *Ledum palustre*, a syrup composed of sassafras and guaiacum, sarsaparilla and Peruvian bark, are also praised.† Dr. Monges states that Dr. Barton had informed him that he had cured it with the nitrate of silver, given internally: its effect upon the colour of the skin proves that it reaches the seat of the disease through the circulation, and that it may be probably useful; as assistants, frequent ablution with warm water, with gentle friction by means of a sponge, in the manner recommended by Dr. Morrison,‡ will be found useful. A sponge is dipped in luke-warm water, squeezed till dampness only remains, and then covered with oat-meal; the parts are rubbed with it for some time, and the operation repeated two or three times a day in proportion to the itching. After they are rubbed sufficiently, they are washed and gently dried. Oil is then applied by means of a brush, and the parts covered with slips of linen.

The cracks and fissures in the hands have been cured by

* Plumbe. For the mode of preparing the solanum, see the head Running Tetters, (*impetigo*) in this article. It succeeded in 21 out of 22 cases of lepra, with Dr. Creighton. In this city it has failed.

† Dict. des Sciences Medicales.

‡ See Edinburgh Medical and Surgical Journal, Vol. XVI., as quoted by Plumbe.

blisters, after the disease has been removed from other parts of the body.*

The use of the kali sulphuretum is recommended by Dr. Earnest, in the dose of two scruples ; a solution of it was also tried as an external remedy. With Mr. Plumbe it did not succeed. Besides the use of these remedies, ointments made of the various preparations of mercury, calomel, white and red precipitate—also of tar and sulphur, a solution of lunar caustic, all deserve a trial: though it must be stated, with very uncertain results.

It was before observed that Dr. Willan, under the names derived from the parts, had described this affection as it appears on the lips, palms of the hands, prepuce, eyes, and scrotum. It is particularly liable to attack the hands of washerwomen and bakers ; in the former, from the irritation of the caustic of soap, and the drying effects of meal in the latter. In these cases, the warm bath and lead water applied alternately for a few days, and afterwards the ointment of red precipitate ; and if obstinate, the sulphur vapour bath will sometimes succeed. In this city, with the latter remedy, Dr. Emerson has done much good, particularly where the disease affects the palms of the hands.

When it attacks the lips and prepuce, some constitutional disorder will be found generally to be combined, to which attention must be paid ; and in the disease of the prepuce, the fissures or cracks formed in it from the loose cellular structure of the part are much deeper than when it attacks the lips ; the discharge continues glutinous till the disease is suspended ; in this form the red precipitate ointment diluted to half its strength succeeds well.†

The Leprosy of Lombardy (Pelagra).

This disease, which prevails in the lowlands of Lombardy, and in the plains and hills which border on the Alps, commences somewhat like lepra, with dusky red spots on the back of the hands and feet, attended with slight pricking and itching ; small tubercles arise ; the skin becomes dry, scaly, and divided by furrows and cracks. These symptoms disappear towards the close of summer, as also the accompanying debility, wandering and irregular pains in the back and

* Dr. Cumming, Medical and Physical Journal, Vol. XII., as quoted by Plumbe.

† Plumbe.

head, vertigo, and irregular appetite (without fever). They return again in the spring of the second year, with more intensity. Partial sweats, spasms with disordered intellect increasing with the heat, and abating again in the autumn and winter: in the third year the disease appears earlier, and is more aggravated; scorbutic and cachectic symptoms with weakness of the voluntary powers, debility, diarrhœa, dysentery, offensive breath and perspiration with irregular appetite and digestion, dropsy, spasms, melancholy, mania, and idiocy terminate the disease. Moral and physical misery, produced by the wretchedness of degraded Italy, is supposed to be its cause. It is considered as an aggravated degree of lepra, and is the last of the scaly varieties.*

Lichen.

The disease termed Prickly-heat gives a good idea of the genus *Lichen*; it consists of an eruption of pimples terminating in scurf, connected with internal disorder; recurrent, but not contagious; † heat produces this eruption, in its common form the prickly-heat (*lichen tropicus*). Sometimes it is attended with itching and tingling, and often by irritation and fever (*lichen simplex*). Sometimes it occurs in patches (*lichen circumscriptus*); at others the pimples have a hair growing from their centre (*lichen pilaris*), a form produced by hard drinking, which degenerates into the dry scaly tetter (*psoriasis*).‡ See plate, figs. 14 and 15.

The prickly-heat (*lichen tropicus*) is best treated by keeping the bowels open, the body cool, and avoiding exercise. Sometimes this disease is attended with fever (*lichen agrius*) and great aggravation of symptoms; the pimples becoming red, hot, burning and smarting as if scalded, particularly when washed with soap and water: the fever and pimples subside in the morning, and return in the afternoon; small yellow vesicles appear mixed with the pimples; and by frequent returns of the disease the skin becomes harsh, thickened, and painful on being touched. It terminates by exfoliation. It may also be repelled into the system, by cold applications; then, vomiting, fever, and delirium have sometimes been the consequence.

The best remedies for the (*lichen agrius*) prickly-heat attended with fever are, mild aperients, the warm bath and a low cooling diet; after the system is somewhat subdued,

* Dr. Holland, *Medico-Chirurgical Transactions*, Vol. VIII.

† Willan.

‡ *Id.*

Plumbe recommends the sulphur bath, and on recovery, tonics have been advised by other writers. Wilkinson recommends carbonate of ammonia to be given every day in the dose of 5 or 6 grs. every four or six hours, with five grains of calomel at bed time twice a week, and followed in the morning by a common purge. Aromatic vinegar, diluted with one third of water, is to be applied to the parts that are itching, with a piece of lint wrapped round a probe, and repeated every day or two.* In the mean time the following lotion is used: Ammon. subcarbonat. et Plumb. superacetat. ℥i. Aq. Rosæ ꝑiv. M. f. lotio.

A form of disease occurs in young infants, mostly on the head, neck, shoulders, and arms; when the pimples are florid, and mixed with red patches, it is called red gum (*strophulus intertinctus*); occasionally yellow vesicles as in the violent form of prickly-heat described above appear, and terminate in scurf. As it is often connected with a weak and irritable state of the bowels, and indigestion; and, if repelled, bowel complaints ensue, it is necessary to avoid exposure to a stream of air, or to use the cold bath. In general cleanliness only is requisite. If the eruption be repelled, a warm bath reproduces it, and dissipates the affections which are its consequences. The white form (*strophulus albidus*) differs only in the colour of the pimples; the (*strophulus confertus*) rank red gum or tooth rash appears during dentition, and has no peculiarity worthy of notice; the (*strophulus volaticus*) is the same disease, attended with fever: the (*strophulus candidus*) white and larger pimples, like prickly-heat in all its forms; they require no treatment but moderate and cooling diet, with occasional laxatives. See plate, fig. 13.

On the Various Forms of Itch.

Great itching, with or without pimples of the colour of the skin, form the disease called Itch (*prurigo*).† Uncleanliness aggravates the disease, producing pustules and vesicles, or the common itch.

Prurigo is sometimes attended with a sensation as if ants were creeping over or biting the skin (*prurigo formicans*). The pimples are so minute as to be scarcely seen, and, owing to the irritation of scratching, are covered with scabs. It (*prurigo formicans*) sometimes terminates in a pustular affection like the running tetter (*impetigo*), showing the difficulty of establishing precise specific differences in these diseases. Sometimes headach, sickness and pain of the stomach, pre-

* Emerson's Notes on Wilkinson.

† See plate, fig. 16.

cede its appearance or follow its repression; it then is the result of some constitutional disorder, and appears commonly in persons of a sallow complexion who are troubled with visceral disease.

Fish, and stimulating animal food; wine, and spiritous liquors taken immoderately, produce it: white wine has also excited it in some peculiar habits. It is not contagious, nor does it depend always upon insects. It is most troublesome in spring, the beginning of summer, and is increased on going to bed, or standing before a fire. An eruption resembling this disease is produced by handling animals affected with the mange. It generally attacks old, but is most severe in young persons.

Medicine in this disease is frequently ineffectual. In the prurigo formicans, sulphur internally exhibited is recommended by Willan, in the following combination: Carbonate of soda \mathfrak{z} iii. Sublimed sulphur \mathfrak{z} ss., thoroughly mixed, and taken in the dose of \mathfrak{z} ss. every two hours till it operates: at the same time an infusion of sassafras, or of juniper tops, is given. Strong purgatives and sudorifics are injurious; warm sea baths have succeeded in some instances; tonics and the oxymuriatic acid are praised by Bateman; the diet should be light, antiphlogistic, and easy of digestion, as whey, milk and water, and farinaceous substances.

Ointments in general are of little use: a decoction of the seeds of stavesacre, commonly called in this country larkspur (*delphinium staphisagria*), is recommended by Willan, where there are acari or other insects upon the skin. Baths made of alkalized sulphur are highly recommended, particularly in the itch of old men; the artificial Harrowgate water is worthy of attention, and is prepared in the following manner: by Wilkinson, of London, an author of note: it is highly recommended—

R. Sodæ muriat. \mathfrak{h} ii.
 Magnes. sulphat. \mathfrak{z} iii.
 Sulphuret. potass. \mathfrak{h} i.
 Aq. fluvial. cong. xxxiv.

The salts must first be put into two-thirds of the water cold, and when dissolved the sulphuret of potash is next added, and then the remainder of the water at the boiling temperature.

Dr. Wilkinson treated a dreadful case of this disease, with diluted aromatic vinegar to the affected and bleeding spots, alternated every day with an ointment of sulphur and pitch,

washed off every other day. Plummer's pill (pilul. stibii compos.) in the dose of four grs. at night, with the solution of arsenic, thrice a day. With regard to the Plummer's pill it may be observed, that Dr. Wilkinson preferred it as the best means of correcting the impaired condition of the digestive organs in the diseases of the skin generally;* and for acting directly upon the surface, the Fowler's solution he thinks the best remedy. Prurigo, lepra, psoriasis, pityriasis impetigo, porrigo, scabies, herpes, excepting (*H. zoster*) sycosis, and all their varieties, he cured upon this plan and with these remedies, failing however in one case out of twenty-five.

In one case recorded by Willan, owing to a species of *pulex* or flea, a strong solution of corrosive sublimate alleviated the symptoms. Decoctions of tobacco and of *cocculus indicus* did so also, though in a less degree; the disease always returned. Other insects, the common louse (*pediculus humanus*), and the body louse (*pediculus vestimentorum*), produce a troublesome itching; it is not true, that any insect connected with this disease is in any instance bred under the skin. The sulphur vapour-bath in all the species of itch is valuable, as it will destroy any insect from which it may originate. The oil of turpentine diluted with the oil of almonds has the same effect.

When prurigo attacks the verge of the anus, there is more moisture about the anus than usual, a glutinous irritating fluid is secreted from the folds of the rectum, and after the perineum is abraded by the scratching, a serous secretion takes place, which substitutes this troublesome symptom for smarting and tenderness.†

Where this form is constitutional, alteratives and tonics may be resorted to, but if it be local, it should be recollected, that the most approved experience justifies the idea, that it is dangerous suddenly to suppress it. Those remedies, therefore, which correct the diseased secretions, should be selected, and not those, which, from their sedative and astringent nature, have a tendency to repel them. Accordingly, to produce this effect, lime water $\bar{\text{z}}\text{vi}$. and calomel $\bar{\text{z}}\text{i}$., formed into a lotion, applied to the part, with a light and low diet, and saline purgatives, are the most uniformly beneficial.‡ The lotion may be applied by introducing a pledgit of lint into the rectum, and wetting the adjacent parts with it at the same time. This plan continued for a few days, so as to keep the folds of the rectum free from irritating secretion, relieves the

* Emerson's Notes.

† Plumbe.

‡ lb.

disease. In cases of longer standing, a solution of corrosive sublimate, sufficiently strong to excite slight heat and smarting succeeds. Sometimes it vesicates, and confines the patient to his room. Mr. Plumbe, however, recommends it as a valuable remedy. The mercurial ointments succeed in some cases. When this disease occurs upon the prepuce, frequent ablution, and saturnine lotions relieve it; at the extremity of the urethra, it indicates disease of the bladder; in women, this form of it is frequently relieved by the use of bougies.

When it attacks the pudendum, the irritation is sometimes so great as to produce nymphomania; oxymuriate of mercury, in the proportion of two grains to the ounce of water, with diluted alcohol, may be tried; and, lest there should be excoriation, it will be prudent, in all cases, to commence with a weaker solution. Saturnine and saline lotions, as the acetate of ammonia, are useful, as also the ointments made with the salts of mercury.

The Common Itch (or Scabies).

Vesicles terminating in pustules, attended with excessive itching, and occurring upon tender parts, as the wrists, and between the fingers, distinguish this disease. It is the result of uncleanness, and is communicated by contagion. Contact with the clothes, or the matter of the pustules, appears to be necessary for its propagation, and is wholly unconnected with any constitutional cause, except after it has continued for some time, when it leaves an impetiginous affection, which, after its peculiar character has been eradicated, corresponds to the scabies cachectica. The best authority on the subject appears to refer, with certainty, its origin to an insect, the *acarus scabiei*, long since described by Linnæus.

Sulphur, in the form of ointment, rubbed at night before a fire; the sulphur vapour bath; decoctions of hellebore, digitalis, and tobacco; sulphuric and oxygenated muriatic acid, properly diluted; solutions of oxymuriate of mercury, muriate of ammonia, and of potash, are the remedies best supported by recent and more distant observation. Sulphur given internally is considered by Heberden as entirely useless.

The Mercurial Disease.

The vesicles produced by exposure to the sun, give a good idea of all the species comprehended under the genus ecze-

ma, to which this disease belongs. The mercurial disease, (eczema mercuriale, hydrargyria,) is characterized by heat, itching,—a sense of tingling, extending over the body, but particularly on the flexures of the joints, as the arm-pits and groins. These symptoms are succeeded by roughness and tumefaction of the skin, which is of a bright red, as in scarlatina; sometimes the colour is darker, and is gradually followed by minute vesicles, containing a transparent fluid, which gradually becomes opaque and milky; they at length break and discharge a fœtid, viscous, and sometimes excessively irritating fluid. The cuticle desquamates in large patches, and leaves the parts first attacked raw and covered with the same secretion. A slightly furred tongue, a great appetite, a weak and quickened pulse, with weakness, are at first the only constitutional symptoms; the new cuticle is destroyed and reproduced several times in twenty-four hours; the disease lasts for a day, and sometimes for weeks.*

It is also produced by balsam copaiba, opium, antimony, &c. In these cases it continues only a short time. The accompanying state of the system, in its violent form, may be inflammatory, moderate, or typhoid, according to circumstances, accompanied with great debility and diarrhœa.

The nares, trachea, and bronchiæ, are sometimes violently inflamed.† As many cases of this disease have occurred, when the patient was under the influence of a catarrh, it has been supposed to be owing to this cause, combined with the influence of mercury. Idiosyncrasy, favoured by cold and moisture, appear to be its true causes.‡

Cure:—The entire omission of mercury, both internally and externally: the application of a solution of the acetate of lead, (℥i. to a quart of water,) when the redness, heat, and itching first appear, and before the pustules are formed, and never after they break; the use of the warm bath is valuable to allay irritation, and prevent its return; sponging the affected parts with warm water, the application of meal, impure carbonate of zinc, finely levigated, to those parts which are denuded; mild laxatives, given so as to keep the bowels free,§ and after them opiates,|| constitute the most approved treatment. The bark is not indicated till the heat

* Plumbe and Alley.

† Rutter.

‡ Alley.

§ Pulv. Jalap. ℥ii. Super-tartrit. potass. ℥ss. m. intim. Take a tea spoonful every two hours. Or, ℞. Electuar. lenitiv. Sulphur. sublim. aa ℥i. m. f. dos. i. Or,

Supertartrit. potass. ℥i. t. d.

|| Hoffman's anodyne liquor: or camphor mixed with the opium, answers better than when given alone.

and fever are abated, and the tongue has become moist ; wine in its typhoid form has been very useful. Abscesses are relieved by poultices of bread and milk, and the reproduction of the cuticle is assisted by equal parts of linseed oil and lime-water. Cerates composed of lead have been advised ; its absorption, however, renders them dangerous.

The Running Tetter (Impetigo.)

The running tetter consists in small pustules, breaking and discharging a thin, and sometimes a yellow humour, followed by scabs of the same colour ; the cuticle is rough, reddish, or scaly, with a slight discharge from the cracks or fissures, or beneath the scabs : ulcers succeed, discharging a clear ichor ; their cavities are considerable, though unequal, and are surrounded by pustules. In men who have passed the middle period of life, or are sedentary, their edges are often livid, and the limbs become œdematous. See plate, fig. 23, representing the vesicles of the disease.

The disease sometimes commences about the knuckles, and spreads along the fingers and thumb, wrists and fore arm ; it is succeeded by a watery discharge, laminated scabs, a scaly and chopped cuticle. See plate, fig. 23, the advanced stage, with the scab partially covering it. Fresh pustules, attended with heat, soreness, and violent tingling follow, the skin becoming by its frequent repetition rough, harsh, and inflexible.* The disease appears only in the *colder seasons*, disappearing in the summer. Headach, indigestion, pain in the stomach, violent pains in the limbs and back, and cramps of the lower extremities often precede it. It attacks adults and persons of advanced age most frequently, and sometimes children. Intemperance, sudden changes of heat and cold, and violent exercise produce it. The predisposition to it is hereditary ;† it is sometimes the result of local causes alone, as where alkali has been applied to the skin, by the use of soap, as in washerwomen ; it appears also in the hands of bakers, from the application of meal. This description embraces all its varieties, comprehended under the species *figurata*, *sparsa*, *scabida*, *erysipelatos*, and *rodens*. The differences constituting the two first, consist in the figure and distribution of the inflamed patches ; the third is distinguished by the quantity of scabs ; the fourth and fifth by the accidental variety of inflammation, which attends it. The same

* Willan and Bateman.

† Ibid.

remedies are equally useful in all, with the exception of that which terminates in deep ulceration (rodens), which is entirely intractable, and terminates fatally; it is fortunately rare: Mr. Plumbe and Bateman never saw it, and Willan but once, when probably another disease was complicated with it.

The use of mild lotions to remove the scabs, and of alterative medicines,* form the leading treatment of this disease; of the former, milk and water, infusion of bran, as a wash to remove completely the scabs. By some practitioners all ointments are avoided, from their slow penetration to the seat of the disease through the scabs, and also from the circumstance that they often increase it. Mercury, zinc, and saturnine applications in some cases, Dr. Willan states, occasioned an aggravation of the symptoms. Then it has been considered, and indeed it will be found generally expedient, to keep the skin moist by covering it with an oil skin after it has been washed, or, as Mr. Plumbe recommends, with linen wet with the sugar of lead.

Some cases bear the white precipitate ointment, and those of goulard, and the oxide of zinc. The editor of this Journal has seen used with effect the following ointment: R. calom. et hydrargyr. precipit. alb. \mathfrak{z} i. corrosiv. sublim. \mathfrak{z} i. axung. porcin. \mathfrak{z} i. m. The case yielded more to this than any other remedy; it was necessary, however, at times to weaken it. The red precipitate ointment, with five or six parts of simple ointment, has also been found useful. The general precaution, however, above given on this subject, should be regarded. Lotions composed of digitalis and poppy heads with mallows, sometimes alleviate pain; they, however, leave the parts so stiff, that they cannot be continued. Sea-bathing, both warm and cold, have also been found of advantage. A wash of the prussic acid in this form, R. acid. prussic. \mathfrak{z} iii. alcohol. \mathfrak{z} ss. aq. distillat. \mathfrak{z} viiss. m. has been also used with success where the disease is not extensive; it succeeds peculiarly well in subduing the inflammation surrounding the diseased spot; the scabs, however, must be previously removed. The sulphur vapour bath has been used with great success, and, in the opinion of Dr. Emerson, succeeds best in those cases where the discharge is purulent. The use of Plummer's pill (pil. stibii. compos.), with the decoction of sarsaparilla, is recommended by Willan. The system should be treated according to its state, adminis-

* Willan and Bateman.

tering tonics and purgatives as they are required by the symptoms. Sulphur, in the milder forms and first stages of this disease, given in small doses, so as not to purge, has been advised, particularly when combined with nitre or cream of tartar, at the same time making use of tepid ablutions, and the application of the oil skin; the sulphureous mineral waters are also found to be valuable: if sent to a distance, they should be bottled at the spring, as, on exposure to the air, they soon deposit the sulphur in an ash-coloured precipitate, in consequence of the hydrogen uniting with the oxygen of the atmosphere, and thus letting fall the sulphur held in solution.* The Lisbon diet-drink, decoctions of sarsaparilla and cinchona, with antimonials and the fixed alkalies, have been found extremely useful in obstinate cases; the hydragyrus cum creta, with the pill of Dr. Plummer at the same time, is also recommended; the decoction of the solanum dulcamara, as prescribed by Dr. Creighton, has also succeeded. R. Stipitum dulcamar. $\bar{3}$ i. Aq. puræ lib. jss. Boil to one pound, and when cold strain it. Let the patient at first take two ounces thrice a day, to be gradually increased, till a pint is taken in the course of the day; if it produce uneasiness, the addition of the compound spirit of lavender relieves it; in weak and nervous people a smaller dose should be given, as it sometimes is followed by nausea, palpitation, and vertigo.

An affection of the ears, bearing the character of this disease, is described by Mr. Plumbe; it appears principally among females, and exhibits, if not minutely examined, an abraded state of the part, with much redness, and a slightly fluid secretion, attended with troublesome itching and heat. On examination, the cuticle appears to have been removed by the breaking down of the vesicles, and the discharge of their contents, in other cases the vesicles are still seen, and are ruptured by the slightest force.

This disease occurs both in delicate and robust habits, and is alike ineffectually treated by constitutional remedies, whether debilitating or the contrary. The usual sedative washes are of little value; the black lotion, calom. $\bar{3}$ i. aq. calc. $\bar{3}$ vi. and that of prussic acid given above, have been permanently useful, and when one fails, if used alternately with the other, they succeed. Cathartics, such as calomel and jalap, exhibited twice a week, without respect to the charac-

* Plumbe.

ter of the habit, whether spare or otherwise, are the best internal remedies.

Herpes.

The vesicles which occur about the lips after a common cold, give a good idea of the disease named herpes. It appears in distinct, but irregular clusters of united blisters, following in quick succession, and set near together, on an inflamed base, extending beyond the margin of each cluster, but which does not appear till after the vesicles. Heat, tingling, and sharp pain is felt in the seat of the blisters, particularly if pressed; the transparent fluid becomes milky, opaque, and hardens into brown scabs. (See plate fig. 18, for a view of the disease in an advanced state.) Slight feverish symptoms, occasionally with thirst, and a quickened pulse, accompany it; and in its severest forms, languor, rigors, headache, continuing generally as long as the inflammation spreads, and fresh crops of vesicles are produced; in its ordinary forms it continues 14 or 15 days, sometimes from 20 to 25, before the scabs fall off; the blisters appear generally on the abdomen, shoulders, and arms;* when it surrounds the body in a regular line, it is called shingles (*herpes zoster*), when it appears in irregular successions, indiscriminately, on other parts, (*h. phlyctenodes*), from *phlyctæna*, a blister on a purple base.

Herpes is distinguished from erysipelas by its numerous clustering vesicles, by the white and natural state of the skin between them, and by the absence of an inflamed surface before the vesicles appear.† Their regular progress from vesicle to scab, and their limited duration, sufficiently distinguish them from the running tetter (*impetigo*.) It occurs most frequently in summer and autumn; cold and exposure are its most common causes; a violent fit of anger, suppression of the hemorrhoidal or menstrual discharge, sudden change of habits, a diet of oil and fish, the air of marshes, likewise produce it. Like many other eruptions, its appearance alleviates internal diseases.‡

Blisters encircling the seat of the eruption, arrest its progress, if the case be violent, if not, cooling lotions, as lead-water, applied by wetting linen with it, allay, but do not arrest the eruption; puncturing the vesicles diminishes the uneasiness;§ the constitutional treatment consists of low living, saline aperients, decoction of *dulcamara*; the other local applications are, the oil of the walnut kernel, the irritating juice of the *rhus radicans*, the juice of the husk of the cashew nut,

* Bateman.

† Ibid.

‡ Plumbe.

§ Ibid.

for all which, blisters, applied as above, are good substitutes; they are valuable, because they prevent the retrocession and extension of the eruption, from the former of which, much danger is apprehended by some writers.*

Tinea.

An herpetic eruption, slight, limited, and circular, composed of very minute vesicles, disappearing in slight exfoliations, forming a scurfy circle on the part, is called ringworm; it is cured by the above applications. When it occurs on the head it is called porrigo, tinea capitis, ringworm of the scalp. It consists of "clusters† of minute, oozing, red prominences, dispersed in spots through the hairy scalp: some advanced to suppuration, leaving pits or hollows filled with pus, giving a honey-combed appearance, covered here and there with a whitish or yellow scab (tinea favosa).‡ In many, large patches of scab of a definite shape (porrigo scutulata),§ matted in the hair occurs; in some instances one large crust covering the entire head like a close cap, corresponding with the tinea crustacea of Sauvages, and the crustacea and larvalis" (see plate, fig. 12) of Willan: "again a glued condition of the hair is seen, which may be considered to bear some analogy to the tinea granulata of Alibert. In other instances the cranial teguments" show "a scaly appearance, with only a few scattered hairs here and there, the colour of the scabs varying from white to brown. The scabs in some are firmly attached to the skin of the head, in others they fall off like bran (tinea furfuracea and asbestina)|| Finally, the head is completely bald (alopecia or porrigo decalvans).¶

The high authority of Dr. Crampton, from whose Essay on Tinea the above extract is taken, settles into one the many varieties of this disease: I have, in the same patient, seen the characters of the masked (or larvalis), in which the scabs form in extensive plates, also of the granulata; and where the inflammation extended to the face, a scaliness resembling the lepra vulgaris, and on the neck, the psoriasis, which we have considered above as a mild variety of lepra. The masked species by Bateman is thought to be the same as the running tetter, which has also been identified with

* Plumbe.

† Dr. Crampton on Tinea. See plate, fig. 11, for the appearance of porrigo favosa. Alibert, Sauvages, Willan, and Bateman.

‡ Of Willan and Bateman. See plate, fig. 4, representing the porrigo scutulata before the formation of scabs: fig. 5, the partially denuded scalp of long established cases of this disease, with scabs, great irritation, and the hairs which remain insulated by pustules. § Ibid.

|| Sauvages and Alibert.

¶ Willan and Bateman.

herpes, under which we have thrown all the varieties of tinea and porrigo above enumerated. This form of disease also claims affinity with dandriff, as ulcerations generally follow the long neglect of this scurfy state of the cuticle, facts, which show the necessity of simplifying this complicated subject.

Conformably to this view, that all the varieties of this disease are one, we give the treatment of that form, in which local remedies appear to be most effectual, and in particular the description and cure given by Mr. Plumbe, who considers it contagious, and best treated in his own peculiar mode. With this, however, the enlightened part of the medical world disagree. We shall then proceed to consider those which are best treated by constitutional means.

Symptoms of the local form: falling off of the hair, a scurfy and slightly reddened appearance of the scalp on the bare spot, from which the few remaining hairs drop off easily, when slightly pulled: itching succeeds, with yellow pustules surrounding the roots of the hair, containing matter, by which alone the disease is extended by successive applications to the scalp, a circular areola forming on the part, on which the matter falls; the scabs adhere to the hair, accumulate, and produce the disease in its worst forms.* (See plate, fig. 4, for the appearance of these pustules previous to the formation of scabs.)

Treatment: His plan of treatment consists in pinching up the skin, pressing out the matter, then washing the surface carefully. The hairs which come away easily are removed with a forceps, as he believes they act as foreign bodies, and increase the irritation.

The application of pitch to the inside of a cap, and its subsequent removal, drawing with it the hair of the diseased as well as healthy parts of the scalp, he considers as cruel and indiscriminate. Shaving also is inadequate, for the stumps of the hair still operate as an unnatural stimulus. The pus is then removed by soap and water, or a solution of blue vitriol, or, what is better, by rubbing the part with the powder of that salt, and then washing it off. Any additional inflammation which may appear, the result of extraction of the hair, will be removed by sedative applications. The contents of the pustules must be pressed out every morning, and the blue vitriol applied again as above, till at length no fresh pustules appear; small thin scabs, of a darkish colour, like those from other abrasions of the cutis succeed, these separate, and bear a

* Plumbe.

shining red, irregular surface, which, gradually losing its inflammatory character, becomes covered with scurf, till the appearance of the new hair, which take place in six weeks or two months, and at the end of three months it will have required its original strength.*

The local remedies which have been advised are various; they all frequently fail; are often useful; their actual value, however, is only to be ascertained by a trial in each particular case.

Ointments of white precipitate alone, or mixed with cerate of goulard;—of calomel;—of red precipitate;—sulphur ointment and soft soap in equal parts, intimately mixed;—tar and sulphur ointments; ointment of subacetate of copper;—the strong blue mercurial ointment;—of nitrous acid;—of acetate of lead and opium;—of hellebore;—of mustard;—stavesacre (*delphinium staphisagria*);—of black pepper:—of capsicum;—of Aleppo galls;—of rue;—of *cocculus indicus*, $\mathfrak{z}\text{ii.}$ to $\mathfrak{z}\text{i.}$ of lard. Lotions of sulphate of zinc and copper;—gum ammoniac dissolved in vinegar, made to the consistence of a plaster, and spread upon linen;—of oxymuriate of mercury;—of nitrate of silver;—of solutions of potash;—diluted muriatic acid;—the muriated tincture of iron applied to the part;—adhesive plaster to the spots;—strong savin ointment;—citron ointment, with the addition of the nitrous acid;—lotions of sulphuret of potash;—the decoction of tobacco, (to be applied with great caution, as it has been fatal;—tar water;—the water obtained after preparing the carburetted hydrogen gas;—powdered charcoal;—ointment of the oxide of zinc;—lime-water and sweet oil in equal parts;—the ointment of sulphuric acid removes the itching, and has been much praised by Crampton; it, however, corrodes the linen. Poultices of oatmeal and common brown soap, reduced to a soft jelly;—of soap and of oatmeal half boiled and mixed together; these last remove the incrustations soon. The ointment of Banyer is highly recommended.

R. Ceruss. oz. i.

Pulv. litharg. $\mathfrak{z}\text{ii.}$

Alum. ust. dr. iss.

Mercur. corros. sublim. dr. iss.

Axung. porcin. oz. iv.

Terebinth. Venet. oz. i. m.

The application of the strong sulphuric acid and its immediate removal by ablution with water. *Cicuta* (*conium ma-*

* Plumbe.

culatum) in pills night and morning, with poultices of the same plant. Charcoal alone, or mixed with sulphur, and made into an ointment, have their advocates.

In old cases, attended with considerable accumulations of scabs, in the experience of Mr. Plumbe, extraction of the hair, pressure on the surface of the head, by adhesive straps and bandages, and the application of lead water at the same time, effectually cured them. Setons were of no use. Ointments he condemns, as they spread the infection. Constitutional treatment is of no value, excepting where there is great irritation, consequent on accumulation of scabs from uncleanness. In those cases where the disease has not loosened the hair, and where its extraction is attended with great pain, a palliative plan must be followed; as fomentations, the use of lead water, frequent washing the scalp with soap and warm water, and finally the use of a weak solution of lunar caustic, alternated with one of diluted alcohol, to remove the scurfy state of the scalp, which generally follows.*

Of Constitutional Cases, and their Treatment.—The constitution, in the opinion of Mr. Plumbe, is always affected in the species termed favosa and larvalis, which may be considered merely as aggravated forms of the disease. Depletion and alteratives, with local applications, which have a tendency to remove pain, comprehend his plan. The scabs must be removed by continued soaking in warm water, with a plentiful use of soap. The head must be shaved; poultices and fomentations applied to allay inflammation; with these aids, though used with perseverance, a viscous fluid is secreted for some time, which requires the application of a solution of lunar caustic:

R. Argent. nitrat. ℥i.

Aq. distillat. oz. i. m.

or of sulphate of copper,

R. Cup. sulph. ℥i.

Aq. fervent. oz. ss. m.

two or three times a day, with a camel's hair brush, to the abraded surface, until the discharge ceases; the strength of the solution may be increased, as occasion may require. In all cases where the constitution appears to be affected, the use of mild purgatives, and occasionally, when debility attends, a tonic and stimulating diet, are found effectual. Blisters to the back of the neck have been useful in arresting its progress.

In cases connected with a scrofulous disposition, the tonic

* Plumbe.

plan, with purgatives of rhubarb, has been used with advantage. Warm baths repeated every third evening, with saline cathartics, every second morning, with the application of poultices of oatmeal—of soap reduced to a stiff jelly—of soap and oatmeal boiled together, form the plan which has succeeded with Dr. Crampton, and is worthy of attention: he thinks the extraction of the hair, so warmly recommended by Plumbe, unnecessary; Alibert, and other eminent men of France, support the opinion of Dr. Crampton. In two instances of tinea, followed by baldness, the hair was not renewed, and in general, in this last variety (*decalvans*), the hair gradually grows again, though it is doubtful whether its re-appearance is expedited by any known remedy. The appearances which the disease exhibits are a gradual falling off of the hair, followed by bald indented spots on the scalp, of a pale shining appearance, frequently unconnected, however, with any eruptive disease; of course it is then improperly considered as a species of tinea.

In this city an empirical remedy, supposed to be principally the essential oils of peppermint and cinnamon, has been successful in some instances in increasing the growth of hair in baldness. It is certainly worthy of further experiment, as well as other remedies of the same class. Frictions with laudanum on the bald place have been also said to be useful: on this point I have no experience. Constant shaving; liniments containing an essential oil dissolved in spirit, (2 oz. of the oil of mace, in 3 oz. of alcohol,) and the oil of tar, petroleum Barbádense, camphor, and turpentine, are recommended by authors. They will almost universally fail.

Herpetic eruptions occur on other parts. Those upon the lips, occasionally attended with blisters in the fauces, coming on after a common cold, or indigestion; or supervening upon more serious general diseases, as bilious fevers, and dysentery, require no particular notice. That which occurs upon the prepuce is more serious, as it is often mistaken for chancre.

Herpes on the Prepuce.—Itching and heat attract the attention to the prepuce; which exhibits small red patches, upon which are five or six minute red and transparent vesicles, which enlarge in 24 or 30 hours, and become milky, coherent, and pustular: if on the inside of the prepuce, so as to be protected, they break about the fourth or fifth day, and form an ulceration on each patch, which has a white base, edges slightly elevated, much resembling chancre, particularly if caustic has been previously applied. These irritants produce inflammation, and deep seated hardness: when no application has been made, the ulceration, after continuing for nine

or ten days heals, and the scabs fall off on the 13th or 14th day. When it occurs on the outer surface of the prepuce, the contents of the vesicles begin to dry about the fifth day into a dry acuminate scab, and the part heals below by the ninth or tenth day,* the scab falling off about that time.

Generally, however, it appears that the friction of the clothes or the fingers, presents the complaint to our observation in the form of ulcer, with a yellow white plain surface,† by the removal of the scab.

The vesicles of this form of herpes are distinguished from chancre by the circumstance, that there is no thickening of their basis; they resemble abrasions, only with the difference of the white speck, presented on their removal. If caustics have been applied, it exhibits the appearance of an irritable superficial sore.

There is another disease of the prepuce (*venerola vulgaris*) which deserves consideration; a pustule, drying on the spot, forming a larger and more solid scab than that formed in the above disease; the scab adheres closely to the surface, and if it be raised up it is attached by a stringy slough; a copious secretion of matter is also observed under it, which concretes on the scab already formed, and gradually enlarges it; when it separates an ulcer is discovered below, which heals by granulation.‡

These diseases are usually the result of indigestion. Laxative medicines, with lead water applied to the part; if it do not speedily heal, the black lotion, which consists of calomel 1 dr. with 6 oz. of lime water, may be substituted.§

Herpetic vesicles on the eyelids, with smarting and itching, followed by inflammation of the conjunctiva, is treated best by gentle laxatives, and lead water.

Ecthyma and Rupia.

When the system is debilitated by anxiety, want of rest, fatigue, intemperance, poor diet, and fever, a disease slightly varied from the character of herpes, sometimes occurs. The pustules or vesicles are raised on a circular base, of a vivid red colour, succeeded by a thick, hard, and dark coloured scab, (see plate, fig. 8, *ecthyma*, and fig. 9, *rupia*,) forming varieties of the disease described under the names *ecthyma*||

* Bateman.

† Evans.

‡ Plumbe and Evans.

§ Ibid.

|| In *ecthyma* the eruption is pustular, with a highly inflamed and hard base, the scab is also hard, deeply indented, and surrounded by a deep-seated hardness in the flesh, particularly where they are large. It appears to differ from *rupia* merely in degree; indeed authors are not fully settled as to the fact, that *ecthyma* is attended with pustules strictly. Plumbe

and rupia, which are properly thrown under the head of herpes, as the difference is only produced by the various degrees of affection of the constitution. They succeed frequently to measles, scarlatina, and other diseases, followed by debility; restlessness, loss of sleep, languor, and hectic fever, in this form, often accompany them. The effusion of blood with the fluid matter of the vesicles, gives the scab a brown colour; it has a lamellated structure, and is elevated above the skin, which is also raised and thickened round it, and gradually ulcerates. Tonics, wine, porter, animal and other digestible and nutritious food; and when the scabs separate, if they should be slow in healing, the application of nitrous acid, much diluted with water, assists the cure.

The pustules of this disease are sometimes ushered in by fever, and appear in succession, presenting the stages of inflammation, suppuration, scabbing, and desquamation on the surface at the same time, followed by a dark stain or mark after the scabs fall off: languor, headach, wandering pains, resembling rheumatism, restlessness, with some lurking fever, continue after the eruption appears, both of which last from two to four months. It is best treated by topics, bark and other bitters; sarsaparilla with antimonials and the warm bath. Mercury does no good; sometimes much harm.

In their constitutional characters these eruptive diseases nearly resemble the common fevers, attended with petechiæ. Pemphigus properly connects them.

Pemphigus and Pompholyx.

Small vesicles, sometimes enlarging in the space of a day or more, to the size of a walnut, preceded by languor, lassitude, and marks of fever, constitute the disease called pemphigus (see plate, fig. 10). Small minute red specks are seen on the skin, produced by the rupture of a vessel, on the point where the vesicle forms; the extravasation tinges the vesicles bluish, resembling those of scurvy: generally its contents are simply serum. It is termed pompholyx when the blebs occur without fever: generally it is a disease which disappears in a few days; in others, continues for weeks, with slight fevers at night. The vesicles are followed by sores, which sometimes skin over in a day or two, or are co-

thinks it is owing to an action which resembles that which produces petechiæ. For practical purposes, on all hands, separation is thought unnecessary. Their resemblance to herpes is sufficient to justify their consideration after the species *H. preputialis*.

vered with hard brown scabs like rupia. This disease has appeared combined with petechiæ, and with erythema, in typhous cases; it is sometimes epidemic, and attended by heat, itching, and vesicles, which, when broken, appeared brown, with a mild typhus fever,* which is relieved by refrigerant and saline medicines. Sometimes it has occurred with more violent general symptoms, attended with inflammation of the surface of the eye, and a copious flow of irritating tears; mild means generally succeed; the disease is simply a fever with a vesicular termination, and is to be treated according to its symptoms. Tonics, purgatives, till the stools become natural, puncturing the vesicle, and the prevention of abrasion of the cuticle. Sulphur vapour bath, in one instance, was used with success.†

Sometimes this disease occurs in infants, attended with typhous symptoms; the fluid of the vesicles is slightly purplish and turbid with pus, surrounded by an inflamed red border, terminating in spreading ulcers: in Ireland this disease has prevailed epidemically, usually appearing from the third month to the ninth year; the skin was covered with a livid suffusion; the ulcers were attended with dark edges, great discharge, and fœtor; excessive constitutional irritation after the bursting of the vesicles takes place, with a rapid decline of strength, convulsions and death: the ulcers destroy the connexion between the cartilage of the ear and the cranium, spreading to the eyes and the crown of the head.‡

This form of the disease was often fatal: a nostrum, of which the principal ingredient was the *scrophularia nodosa*, or great figwort, made into an ointment, was applied to the ulcers with good effect, preceded by the application of poultices made of oatmeal and porter, for eight hours before the use of the ointment; it was melted, and applied with a feather when it acquired the consistence of honey. Yeast was also given internally. As a general rule, the disease is to be considered as typhous, and treated accordingly.§

We have heretofore considered those affections of the skin which are attended with constitutional irritation, and originate in vesicles, gradually approaching, as we advance, the more terrible and deeply-seated diseases, which engage the whole system. Of these, Petechiæ are the most remarkable, and are now considered.

* M. Peliet. *Journal de Medicine*, 1813, quoted by Plumbe.

† See Plumbe, Willan, Bateman, and Stokes.

‡ See Plumbe, also Dr. Stokes' paper, as quoted by him.

§ Ibid.

Petechiæ, or Purpura.

Petechia is a spontaneous effusion of blood below the cuticle, resembling the dark marks left by a whip, (see plate, fig. 6, for a good representation of petechiæ, or purpura simplex, *i. e.* without fever.) In its simplest form, languor, slight pains in the limbs, with a loss of muscular strength, generally precede, sometimes even for weeks, the appearance of the petechiæ, which vary from the most minute point to any indeterminate size; they resemble the bite of a flea, from which, however, they may be distinguished by their more livid colour, and by the absence of the distinct central puncture, and the redness disappearing on pressure, which accompanies the bite of that insect. Other varieties of this disease differ only in degree. In the purpura hæmorrhagica, the petechiæ assume the form of wheals, livid patches, and stripes, at first of a bright red colour, and afterwards livid, becoming brown or yellowish as they disappear, (see plate, fig. 7, for a view of *p. hæmorrhagica*,) the cuticle over them being shining, and not sensibly elevated, sometimes, however, forming into vesicles containing black blood. These small vesicles appear particularly on the tongue, gums, and palate, where the cuticle is thin. Hemorrhages also accompany it, first from the lungs, or other internal parts, where the covering is more slight than the external skin, and destroying life suddenly, no mortal symptoms previously threatening. Deep-seated pains sometimes occur about the breast, loins, and abdomen, with tumor, tension, and tenderness of the epigastrium; syncope sometimes occurs; in others, the patient has been perfectly well, though he has had petechiæ for months, and suddenly has been carried off by hemorrhage. In some the blood oozes gradually from the nostrils, gums, and from the lungs or the bowels. The bowels are often constipated, and the stools black; sometimes, however, they are perfectly natural.*

It occurs most frequently in persons debilitated by low living, or other diseases, but sometimes it appears suddenly in those who enjoy the most perfect health, and who live in ease and affluence; a circumstance which renders the pathology of the disease difficult. It has been considered as scurvy, and the vesicles and blotches would seem to justify the idea; yet it does not yield to fresh vegetables and acids, and the usual medicines given for that disease. It should, however,

* Willan, Bateman, Plumbe.

be recollected, that the scurvy can be produced by a diet entirely vegetable, and then it must be cured by fresh animal food; the blood of the rein-deer relieved it in Russia, when induced by vegetable diet. The disease may therefore resemble scurvy, though the plan of treatment necessary be entirely different.

Sometimes where the pains internally have been excessively acute, bleeding has cured it, the petechiæ disappearing immediately; the pulse in these instances was hard, and the skin hot, with other symptoms denoting internal inflammation. In such cases no doubt both local and general v. s. would be useful; they show that no plan is suited to every case. In general, however, a contrary method must be adopted.

The free administration of purgatives, as long as the stools continue black, form an essential part of the treatment; and, if with this symptom there should be any local pains and inflammation, bleeding with leeches from the part, or, if the habit tend more to typhus, the application of a blister will be proper, and, after the bowels become natural, tonics may be freely given.

This disease evidently approaches typhus in its character, and must be treated according to the state of the system. It accurately corresponds with the epidemic which occurred in the northern states about twelve years ago, of which the treatment was very various. I have seen in the typhus epidemic, about the year 1813, many cases where the patient, in the course of a few hours, from apparent health was seized with sudden languor, yawning, aversion to being disturbed or moved, making continual and earnest requests to be permitted to die. These cases occurred frequently—some with petechiæ, others without. In New England they were general, here more rare.

In this epidemic there were three varieties, the first attended with fever alone, of a slow typhous kind, without topical affections; a second had the same fever and local inflammations; in others, excessive and sudden languor, debility, without fever or local inflammations. They appeared to me in all the grades of the typhous epidemic, and the last form to analogise exactly with those described under the title of purpura. In that epidemic I found generally black stools, and was completely successful by the use of purgatives, followed by stimulants, where the debility permitted the use of evacuations. When this excessive languor occurred, stimulants of the most active kind and in great quantities were

immediately required ; and, until the strength was restored, any evacuations in that variety were impossible. After the strength was recruited, the evacuation of black matter from the bowels by continued purgatives, produced immediate increase of the tone of the system, and by tonics and stimulants they recovered.

In Europe the practice has varied. Dr. Bree, a man of celebrity who attributes it to compression of the brain, giving rise to a constriction of the extreme vessels, has succeeded in curing it by bleeding and purgatives ; to the latter, in the opinion of Mr. Plumbe, they owed their success. Dr. Harty succeeded with purgatives alone. The dark feces which are discharged refer the origin of this disease most properly to the bowels ; and the success which has attended its evacuation, both in the moderate and more violent cases, render it most worthy of a trial. Turpentine has been administered after effectual purging, with good results. Mr. Plumbe believes bleeding dangerous. In the epidemic of the winter of 1813, in cases of this description, it destroyed life.

Some general features of resemblance to the state of the system in this disease, is also seen in some degree in the summer diseases of this climate, as in the yellow and the bilious fevers, and cholera of warm countries. Hæmorrhage from the gums, continuance of apparent health till the moment of death, the black discharges from the stomach and bowels resembling coffee grounds, and sometimes tar, not unfrequently accompany these diseases. In the typhus of our winters the same thing appears. Purgatives succeed well in all these varieties, and I believe are mainly to be depended upon ; other medicines are to be regarded rather as assistants ; and with regard to the analogies which unite the various forms of purpura with typhus, scurvy, the low remittents of damp situations and of winter and spring, with those of summer, as the yellow fever and dysentery, I think it will be found that the different shades which approximate them, and by which they extinguish into each other, are infinitely varied, and that it is impossible to class them into genera and species, or to separate them by unalterable characters. As to the treatment, it is equally impossible to be fixed by any certain and invariable routine, but must be regulated and varied according as the character of the system, of the habits, of the seasons, of situation, &c. may modify the disease.

The Nettle-rash or Urticaria.

Urticaria or nettle-rash is a disease of the constitution, attended with excessive itching and smarting in the skin, terminating in wheals or round white circumscribed prominences (see plate, fig. 17, for a view of the two more common forms of it), surrounded by red patches of inflammation. It sometimes arises without any obvious cause, most generally from accidental indigestion. It has been produced by eating almonds, honey, cucumbers, fruit, opium, &c.; herrings, crabs, mussels, and lobsters, eaten in the commencement of the putrefactive process, are its frequent causes. Within the tropics, certain fish are often poisonous and produce it; these are, the herring and the yellow-gilled sprat; the noxious power is confined to no particular part of the fish, and does not, as has been conjectured, depend upon copper, with which its substance has been impregnated;* sometimes the morbid appearances do not take place for a day after the fish has been eaten; in others, immediately after; nausea supervenes, the offending matter is thrown off, and the disease ceases. The symptoms of this form are, weight and oppression at the stomach, nausea, vertigo, general uneasiness, numbness of some particular part of the body, constriction of the throat, a sense of heat about the head and eyes followed by urticaria, attended with great tumefaction, eruption, itching on the skin with immoderate thirst and vomiting,† and sometimes diarrhœa. Sulphate of copper, from its sudden operation as an emetic, and jalap, are recommended as the principal means of cure. Ether, in doses of 20, 30, or 40 drops, are highly recommended. Vinegar, citric acid, and also sugar, are taken with the fish, as antidotes.‡

The nettle-rash is sometimes attended with fever, ushered in by headache, languor, faintness, nausea and pain at the stomach, quickness of the pulse, and followed some time after by wheals, heat, tingling and itching on the skin, with fits of coldness and shivering. In some instances it is necessary to sleep with the clothes on to prevent its recurrence. The wheals appear on one part and disappear on another, the pain and sickness at stomach being relieved as soon as the eruption takes place. It continues from one day to three weeks, scaliness of the cuticle appearing on its final removal.§ It sometimes alarms by the occurrence of fainting on the re-

* Plumbe—Burrows. † Burrows. ‡ Plumbe. § Willan.

cession of the eruption ; and Willan relates a case in which it was fatal in a person of impaired constitution addicted to intemperance. It is not, however, generally dangerous. As to its treatment, it is frequently obstinate, yielding little to any medicines. V. S., purgatives, salivation have done injury ; whilst it has yielded to a soft antiphlogistic diet, composed of milk and water, whey, buttermilk, &c. and by eating little at a time and often, an entire change of the mode of living, of air, and sea-bathing, offer the best prospect of relief. In cases of long standing the cause has been discovered by omitting one by one accustomed articles of diet ; and the patient has been relieved. In one instance recorded by Dr. Willan, it continued for thirty-eight years, with but one considerable remission, which occurred on the attack of another disease. It is sometimes important to reproduce the eruption after it has receded. For this purpose, the warm-bath, turpentine, blisters, and sinapisms to the skin, are the best remedies.

The other species noticed by authors do not differ sufficiently to require notice. The aq. kali puri, given in the dose of 8 or 10 drops, and the white precipitate ointment, are useful ; the former in the persistent (*perstans*) form, the latter when the wheals are disposed to coalesce (*conferta*). The mineral acids, cascarilla, and other aromatic bitters, have been found useful.

Roseola.

The Rose, or rose-rash (*roseola*), is a light reddish efflorescence of various figures, without wheals, pimples, or vesicles. It sometimes is preceded by slight fever for a few days ; appears in separate small patches, affecting the face and neck, and also the fauces, with a slight sensation of roughness in swallowing. This variety (*æstiva*), runs its course in about five days.*

Sometimes it appears in children in small roundish patches, with little or no itching, tingling, or constitutional affection, terminating in about a week. It occurs generally in children, and in the autumn (*autumnalis* of Willan).

It occurs in children, appearing and disappearing for several successive days, and on different parts of the body : it is then frequently mistaken for scarlatina and measles, and is connected with teething, bowel complaints, &c. (*infantis*). It also precedes the eruption of the small-pox (*variola*),

* Willan, Bateman, Plumbe.

surrounds the vaccine vesicle (*R. vaccina*), or is combined with an eruption of miliary vesicles (*R. miliaris*).*

We have been thus particular, to show the extent of these minute and specific distinctions, and to render as complete as possible the history of these affections. It requires no medical treatment, excepting to alleviate the general symptoms, by laxatives, sudorifics, or saturnine lotions to the parts affected.*

Erythema.

Erythema follows next in the order of affinities: it consists of a continuous redness of some portion of the skin, attended with fever, sometimes accompanying bilious diarrhœa, febrile diseases, dyspepsia, hysteria, hemicrania, &c. It ends in desquamation. The surface frequently exhibits a smooth shining appearance, and appears in anasarca (*E. læve*); at others, it occurs in patches, bounded on one side by a hard, elevated and tortuous border, with obscure pimples. It appears also in extensive patches of a bright red hue; the colour for a day or two becoming vivid, and the surface red with pimples. It declines in a fortnight, assuming, as it disappears, a bluish hue (*E. papulatum*). Sometimes slightly elevated tumours are distributed over the surface (*E. tuberculatum*). These elevations rise slowly into painful protuberances, occupying the course of the tibia, subsiding in a dark bruised appearance of the skin (*E. nodosum*). See pl., fig. 26.

When it occurs as symptomatic of other diseases, the general remedies which are applicable to these diseases should be used; spiritous and saturnine lotions may be applied locally. If the fever runs high, the antiphlogistic plan succeeds; if it be typhous, it is treated accordingly.*

Erysipelas.

Erysipelas is distinguished by heat, redness, swelling, and vesications: it is too well known to require any remarks: it is treated successfully by the mercurial ointment applied externally, as recommended by Drs. Dean and Little; the active ingredient of this remedy I have ascertained to be lard, which relieves it with promptness: olive oil succeeds, but not so well. Dr. Wilkinson, upon the supposition that all the diseases of the skin are the same, and are curable by the same means, states, that, adopting the practice of Dr.

* Willan, Bateman, Plumbe.

Peat, he has by the single remedy of carbonate of ammonia, saved all his patients during seventeen years, in scarlatina, erysipelas, rubeola, urticaria, roseola, and erythema.

From urticaria, roseola, and erythema, death rarely if ever occurs; and in erysipelas he employs auxiliaries; his sweeping testimony, therefore, on examination loses much of its weight. Scarlatina and the measles are sometimes inflammatory: then carbonate of ammonia would we think, be dangerous. These observations, however, are deduced not from actual trial. It may be useful.*

Aphthæ.

Aphthæ or thrush, in the order of affinity, next succeeds. It consists of small vesicles, resembling in colour curdled milk, appearing on the tongue, lips, and the interior of the mouth and throat, and terminating in ulcers, having a florid and unhealthy appearance. They prevent the child from sucking with ease. An impure air, uncleanness, saccharine food improperly prepared, long suckling, a delicate mother, spoon victuals, alone, or combined with improper milk from the mother.† It is generally found to be sufficient to keep the bowels gently open with gentle laxatives, and the use of chalk and alkaline medicines, to remove acidity. Borax and honey form a good gargle. When the base of the nipple of the mother becomes abraded and tender, with fissures in its surface, produced by the acrid secretion from the mouth of the child, changing the nurse, or weaning the child; or if neither be thought advisable, weak spirituous lotions, with the acetate of lead, and the red precipitate ointment diluted, are the best local applications, and will be found generally to cure the disease.‡

This terminates the history of those diseases which resemble erysipelas.

Phlegmon.

A few affections remain, which partake of the character of phlegmon or the common boil. This affection (*furunculus*), is divided into two kinds: one which is confined to the cutis, the other which involves the cellular membrane beneath, partaking of the character of carbuncle,§ forming a tumour of the size of a pigeon's egg. They differ only in extent, and with regard to their treatment little new has appeared, excepting the use of sulphuric acid, which, given, to the extent of

* See Emerson's notes from Wilkinson.

† Plumbe.

‡ Ib.

§ See Plate, fig. 19, for a view of this species.

20 drops thrice a day, and gradually increased till half an oz. is taken daily, deadens the pain, and produces a gradual absorption of the swelling, without suppuration. In general in the treatment of this affection it will be found, that early incisions into the part do no good, and that the best plan consists of poultices, and a free opening of the part after suppuration.

Pimples on the Face (Acne).

"A number of little hard, inflamed tubercles" (acne simplex), interspersed with minute black specks (acne punctata), produced by the sebaceous matter filling the orifices of the follicles, form this disease. They proceed gradually and at different times to suppuration;* Fig. I. of the Plate represents the follicles in the uninfamed state. Fig. II. the same inflamed, enlarged, and indurated (a. indurata). Small pearl-like tubercles are sometimes observed in the skin, produced by the deficiency of an opening by which the fluid can be discharged. They seldom attain the size of a wart, rarely suppurate, and generally disappear by absorption.†

With regard to the treatment of pimples on the face, frequent bathing, and gentle friction of the parts with warm water and soap, are the best local remedies; repellents, as lead water, do no good. This inflammation is sometimes connected with disorder of the stomach in its most common form, in young people between the ages of 18 and 25. I have removed it by giving half a grain of calomel, and a quarter of a grain of blue vitriol, thrice a day. The tubercles in a few days disappear, leaving only a brown mark. Dr. Darwin recommends blisters. They are inconvenient, though they are probably valuable, as they remove the sebaceous matter of the follicles, which cause the disease. Carbonate of potash (10 grains every two hours) given internally, is recommended, as also the oxymuriatic acid in the dose of ten drops five or six times a day, in half a pint or more of sweetened water.‡ Sometimes these tubercles, when connected with a scrofulous diathesis, and disordered digestion, terminate in a slow and unhealthy suppuration, which spreads into the adjacent follicles, producing in the skin considerable collections of matter and inflammation. The skin assumes a dark blue colour, is tender and soft to the touch, particularly in one or two points. If opened, an unhealthy livid edge re-

* Bateman.

† Ib.

‡ Plumbe.

mains, followed by a mark on healing. If it be not opened, the matter is discharged through a small orifice, and gradually the sore heals up, leaving a blue spot, which remains for months.*

Poultices, fomentations, puncturing the tumour, and the evacuation of its contents, appear to be the most approved forms of treatment; afterwards, a lotion of five grains of corrosive sublimate, dissolved in eight ounces of proof spirit, to remove the spots, is valuable. They are to be lightly spunged with it. Mercurial ointment rubbed on the parts at night, also answers well to remove the spots.

This disease occasionally occurs with symptoms of disorder of the stomach, disagreeable breath, bilious and furred tongue, general heat, feverishness, and languor. Tonics then are the best remedies.*

When it attacks the nose in old drunkards, or those addicted to the pleasures of the table, sometimes three or four follicles are inflamed, which being repeated by continued excesses, the nose acquires a red, swollen, and tuberculated appearance. If called early, the puncture of a lancet discharges the matter, and moderate diet, with purgatives, confirms the cure. Friction upon the nose, by means of soft brushes, and soap and water, diminishes the swelling and redness, and improves its appearance.*

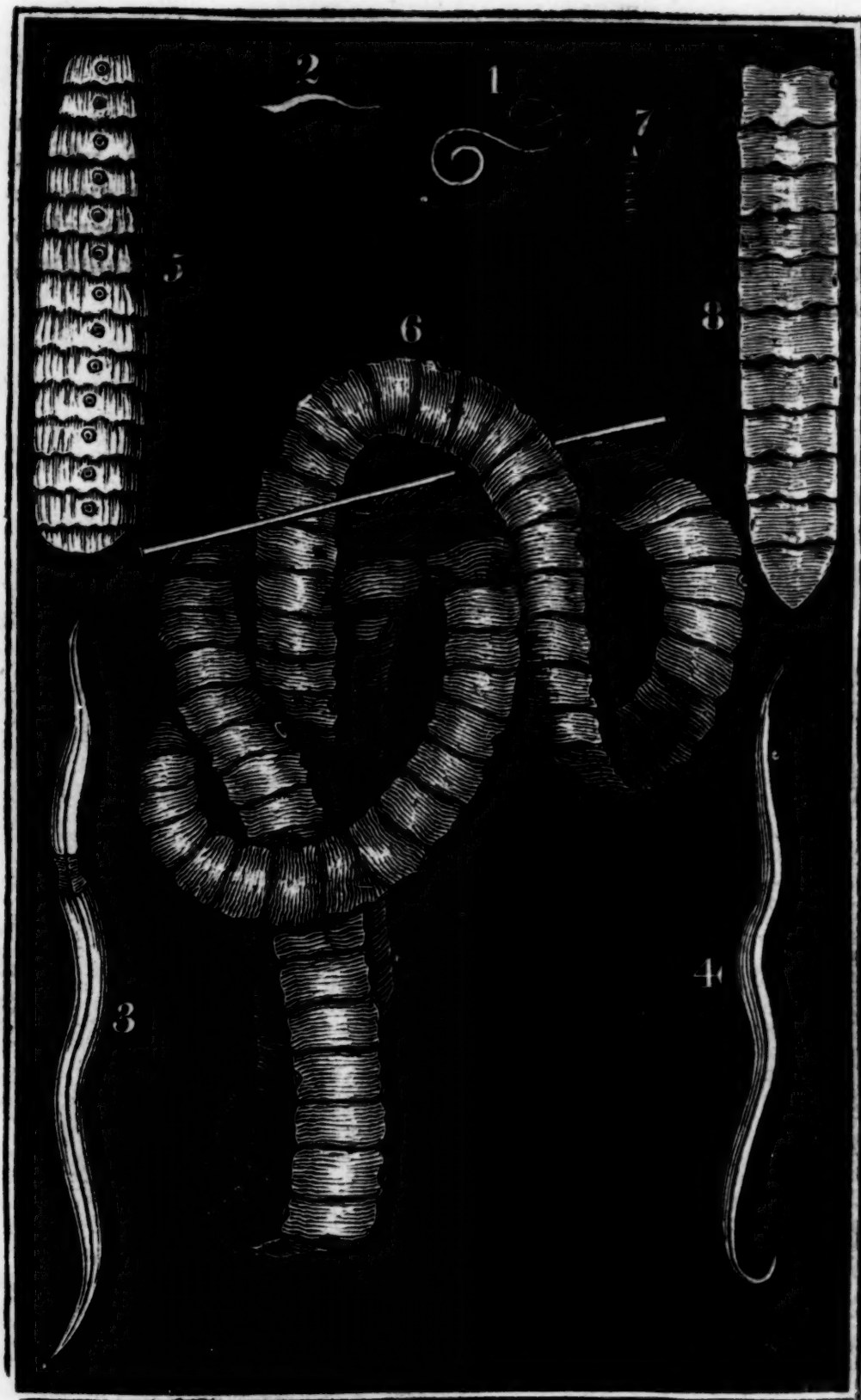
The best remedy is a change of those habits on which this affection depends; and the use of tonics, and alkaline medicines, to remove acidity, or any concomitant disorder of the stomach.†

Sometimes the follicle enlarges, and forms a considerable tumour. It appears frequently in the face and the shoulders, from the pressure of suspenders, and on the head by the hat; it is then only cured by extirpation of the cyst, of which it consists. An incision should be made into it, and then pressing the sides of the skin together, the cyst may be everted and removed. If it be attempted to extract it whole, the cyst is divided and the dissection is tedious and painful. By making a free incision into it, it is easily raised by the forceps, and dissected from the surrounding cellular membrane. It may be relieved by temporarily first introducing a probe, and then pressing the tumour, and thus discharging the sebaceous matter. This operation must be repeated as fast as it fills; the place of the follicle points out that in which the probe should be introduced.†

* Plumbe. † Cooper and Travers' Essays.

Sycosis.

When the follicles of the chin are obstructed, inflammation ensues, the tubercles appear in a state of ulceration, which is irritated by the razor, and forms that variety of the disease called sycosis. See Plate, fig. 3. Puncturing the tubercles, pulling out the hair which grows from them, and poultices, form the treatment. It nearly resembles tinea.



INTESTINAL WORMS.

EXPLANATION OF THE PLATE.

The Plate contains a representation of the most common varieties of *Entozoa* which infest the human intestines; the *Strongylus gigas* and *Distoma hepaticum* being but rarely met with.

Fig. 1.—The male *Tricocephalus dispar*, or Long Thread Worm, of about the natural size.

Fig. 2.—The *Oxyuris vermicularis*, Maw or Thread Worm, of about the natural size.

Fig. 3.—The female *Ascaris lumbricoides* or Long Round Worm, much reduced.

Fig. 4.—The male *Ascaris lumbricoides*, also much reduced.

Fig. 5.—The *Bothriocephalus latus* or Broad Tape Worm. This worm does not always terminate as represented in the Plate, but occasionally ends in two processes; one of which is longer than the other. The head is similar to that of the *Tænia solium*, but is more filiform.

Fig. 6.—A portion of the *Tænia solium* or Long Tape Worm.

Fig. 7.—The head of a *Tænia solium*, twenty feet in length, of the natural size.

Fig. 8.—The last joints of the *Tænia solium*, showing its mode of termination.

ART. XII. *Commentaries on Diseases of the Stomach and Bowels of Children.* By ROBLEY DUNGLISON, M. D. Lecturer on Midwifery and the Diseases of Women and Children; Member of the Royal Academy of Marseilles; of the Royal Society of Sciences, Arts, Belles Lettres, and Agriculture, of Nancy; of the Society of the Faculty of Physicians; the Pharmaceutical and Linnæan Societies of Paris; the Physico-Medical Society of Erlangen; the Academic Medical Society of Marseilles; Secretary for Foreign Correspondence to the Medical Society, and Member of the Hunterian Society of London; Consulting Accoucheur to the Eastern Dispensary, &c. &c.

THE author of this work has lately been elected Professor of the Practice of Medicine in the University of Virginia, the establishment of which forms an interesting epocha in the history of our country. Under the direction of our revolutionary patriots, and late Presidents, Jefferson and Madison, so eminently distinguished in the formation of our government, it may be confidently expected that the varied and extensive operation of science and learning upon the character of the nation, will be applied with the same success, which has crowned their political efforts, and has placed them upon an equality with the most eminent sages and legislators of ancient or of modern times. Like Alfred, in endowing the university of Oxford, which remains to this day a source of honourable recollection in favour of that distinguished patriot, and a useful example to the rulers of the world, it has formed a part of their plan to invite learned men from abroad, a policy which, we think, (the jealous cavils of some of our brethren notwithstanding,) is fully justified by the interests of the school, and the present relations of the new and old world. From the comparative simplicity of manners among the rich in this country, the comfort and happiness of the poorer classes, and the general sparseness of our population, the range of observation here is comparatively limited, particularly from the want of extensive hospitals, the great schools of observation in the old world. The superior organization also of these institutions in Europe, especially on the continent, where all the cases of any particular disease may be submitted to the examination of any one physician disposed to its investigation, and the greater emulation, from the numerous contending rivals upon the same field, render a foreign

choice certainly in favour of this country. It should be recollected too, by those who are disposed to condemn this policy, that the founders of this establishment have great objects in view, in which minor considerations are assembled to evolve ultimate and signal advantages: we shall therefore make a few remarks upon this national and interesting question.

A general university bears the same relation to a state, which a parent does to a family: as the head of a family teaches all those duties, which arise out of affection, sense of propriety, of right, of moral and religious obligation, so a university communicates those principles, and that knowledge, which direct its citizens on the great theatre of affairs: from it, the statesman receives general and sound views of morals, policy, and religion, by which society is consolidated and held together: there the man of science is instructed in astronomy, natural philosophy, geography, chemistry, and natural history, the great nourishers of agriculture, commerce, and manufactures; and the physician in chemistry and medicine, by which life is preserved. A university is therefore to be considered as one of the means, by which the character of the nation is formed, and by which its movements, individually, and as a whole, receive a tone of energy or relaxation, according to the sanity of its plan, and the vigour of its execution. As all nature is now regarded as a vast mine, which contains the elements of power, happiness, and comfort of our species, the present period is one eminently proper for organizing a system of general education for the nation, for which, we have no doubt, the establishment in Virginia will form a valuable model, if our general prosperity as a nation be taken as a criterion of the efficiency of the minds of its founders. A school for kings formed one of the projects of Napoleon: the education of the people, the true sovereignty of every country, is a nobler prize to excite the emulation of a great and benevolent mind. With this great object in view, all difference of opinion should be lost in the general value of the result of an institution, which, as the last work of two of the greatest men of the age, should be received with gratitude as a legacy, after our political rights, the most valuable which could be conferred. To return to the book.

An able work upon the diseases of children is a desideratum. The difficulty of the subject is seldom overcome till after many years practice, and when it is recollected, that one half of the human race is destroyed within a few years after

birth, its importance will be enhanced, and it will be conceded, that our science has much to surmount, in blocking up the wide avenues, by which so many helpless victims are doomed to an early fate. Without further preface, we shall therefore submit to our readers the general character of the work, following the plan of analysis, with occasional additions and remarks. Those who wish to read more extensively on the subject, we refer to the works of Gust. Hume, Heberden, Rougeot, Forestier, Underwood, Gardien, Herdman, Plenk, La Page, Rosenstein, Cheyne, and Hamilton.

Of Intestinal Worms.

The worms which infest the human body, are the long round worm,* the maw or thread worm,† the long thread worm,‡ the tape or long joint worm,§ (the separate joints of which are called *tænia cucurbitina*, or gourd worm), the broad tape worm,|| (the *strongylus gigas*;) and the fluke worm, (*distoma hepaticum*, *fasciola hepatica*, *planaria latiuscula*, *fasciola humana*, *fasciola lanciolata*).

The long round worm, (*ascaris lumbricoides*), "has the head naked, the body furrowed on each side, and the tail somewhat obtuse. This worm is very common, is oviparous, and elastic only when dead: it is most commonly met with in the intestinal tube; traverses the whole length of the canal, penetrates into the ductus pancreaticus, ductus communis chole-dochus, and gall bladder, ascends into the stomach and œso-phagus, and is occasionally voided from the mouth. It descends also into the great intestines, forces the valve of the colon, and makes its exit at the anus. Occasionally the whole of the intestinal tube, from the duodenum to the anus, is filled with them; and they are at times voided in the form of a ball. Frank saw eighty passed in this manner in an acute fever. When dead this worm is quite stiff."

"The colour of every one is different, according to the matter which it may have imbibed, either by the mouth or the pores of the body. Frequently it is of a milky or brownish ash, rarely of a blood-red, colour."

* *Synonyma*, *Ascaris lumbricoides*.

† *Synonyma*, *Oxyuris vermicularis*, of Bremser, *ascaris vermicularis*, Dunghlison.

‡ *Tricocephalus dispar* of Rudolphe, *Trichuris*, *trichuris vulgaris*, *T. intestinalis*, *Ascaris trichuria*, *Tricocephalus hominis*, *Mastigodes hominis*. Dunghlison.

§ *Tænia Solium*.

|| *Bothriocephalus latius*, *Tænia lata*.

The maw or thread worm (*ascaris vermicularis*, *oxyuris vermicularis*) "has an obtuse head, with a lateral, vesicular, membrane; the tail of the male is obtuse and spiral; that of the female straight and subulate. It is generally from two to five lines long, small, white, and very elastic.

"This worm is commonly found in the rectum; but is erratic: it is observed more especially in children; but not unfrequently is met with in adults also."

They are frequently found in the intestines in the form of a ball, and are so covered with mucus, as to be inaccessible to vermifuges. In women, they sometimes escape into the vagina and urethra; and they are also found in the intestines of new-born children.

The long thread worm (*tricocephalus dispar*, *trichuris vulg.*) "is from an inch and a half to two inches long; the head is acute; the body spirally involuted in the male, almost straight in the female; the sheath of the penis in the male pyriform; the capillary portion forms about two-thirds of its whole length, and contains a white, pellucid, reddish or brown matter.

"The *tricocephalus dispar* generally inhabits the cæcum and colon, and is rarely found in the small intestines."

The long tape worm (*tænia solium*) is in length from one to six hundred feet long; is endowed with an undulatory power; contracts or enlarges its diameter; rolls itself into a globular form, and falls from one side of the stomach to the other on turning, when in the recumbent posture. At other times it elongates itself in the direction of the intestinal tube.* When cramped by the position of the patient, or by pressure exerted over the abdomen, disturbed by aliment which does not agree with it, by medicine, or some disease proper to it, or tormented by the approach of death, it leaves hold, leaps about and falls, as it were, into convulsions. Its presence does not exclude that of other worms, as has been imagined. It principally inhabits the small intestines.

The broad tape worm, (*bothriocephalus latus*, *tænia lata*), "has the head and marginal depressions oblong; scarcely any neck; the anterior articulations in the form of rugæ; the others short, almost square, broader, and the last slightly elongated. It is flat, or nearly flat, generally from ten to twenty feet long, and, at its broadest part, from a few lines to half an inch across. It is rarely discharged entire; is of a white colour; but, when macerated in spirit of wine, becomes darker."

* Dunglison.

The *strongylus gigas* "has an obtuse head ; mouth surrounded with six flattish papillæ ; the whole bursa of the male truncated ; the tail of the female rounded. This worm is sometimes met with five inches, a foot, a foot and a half, and even three feet long, and from two lines to half an inch in diameter : it is erratic. Those found alive, especially in the kidneys, are of a blood-red colour ; but when preserved in spirits of wine, they become brown, greyish, or white.

"The *strongylus gigas* is commonly met with in the kidneys of man, and several of the mammalia ; rarely in other viscera, and still more rarely in the intestinal tube. By Chabert and others it has been confounded with the *ascaris lumbricoides*. The genera are, however, distinct ; and although the latter is seldom, if ever, discharged from the bladder, yet such an effect might be induced by a morbid process, as in two cases related by Frank."

"The *distoma hepaticum*, or fluke worm, is obovate, flat, with sub-conical, very short neck ; orbicular pores ; that of the belly being greater than in the other species.

"The young worms are from one to four lines long, and from one-third to two-thirds of a line broad ; of a variegated brownish-white colour : the *adult* are an inch, more or less, in length, and from four to six lines in breadth ; dirty, and of a yellowish, greenish, or brownish colour.

"The fluke has been found in the gall bladder of man, although not by any means commonly. Hence it passes occasionally into the intestinal canal. It is, however, one of the most common varieties of worm infesting the livers of animals, such as the sheep, the goat, the ox, the stag, the fallow-deer, the horse, the ass, the hog, the hare. In sheep affected with the rot, the liver is sometimes filled with them."

With regard to the origin of intestinal worms there is great obscurity, as they exist in the fœtus. Some are inclined to believe, that they may be produced without the necessity of parent insects. They are also found in nature external to the body, and are on this account supposed to be introduced with the air, food, and drink. As, however, our senses are inadequate instruments to determine this question, we regard it as entirely hypothetical, and dismiss it.

Climate and infancy favour the production of worms. A fourth part of the inhabitants of Grand Cairo have tape worm ; and every other person in Holland, according to Rosen.* In this country it is rare. The long round worm,

* Dunghlison.

the maw or thread worm, occur more frequently in children, tania very seldom, being principally confined to adults, especially females: scrophula, poor diet, debility of the digestive functions; in short, every thing which weakens the system, are their causes.

Sometimes the larvæ of common insects are swallowed; as the hair-worm, the leech, the grubs of the fly, of the caddy insect, the larvæ of the bee, of the spider, of the triton palustris, and the lacerta aquatica.

"But as such instances are but rarely met with in children, and as their treatment must rest upon general principles, it is unnecessary to go into any further description of them here. All these, from change of locality and other causes, are very much altered in structure from those which are seen out of the body; so much so, indeed, that it is at times very difficult to determine the exact external species to which they belong: which furnishes a strong corroborative argument for the opinion, that the germs of intestinal worms are received from without; but that, owing to the different circumstances under which they are situated within the body, they become importantly changed in their structure. Of all the erratic worms and grubs, the *hirudo sanguisuga*, or horse-leech, would seem to undergo the greatest metamorphosis; as, in one case, it is reported to have reached the size of a man's fist, and to have contained a pound and a half of blood."

After noticing the obscurity of the symptoms of worms, and properly taking a middle path between the opinions of those who assert, that almost all the diseases of the body are occasioned by them, Dr. Dunglison believes that the health is occasionally much injured by them; but that sometimes singular mistakes in referring diseases to these insects improperly occur, of which the following is a remarkable instance.

"Some years ago, Frank was requested to see a prince who had been attacked with epilepsy. His physician, a respectable old man, assured him that he could make him void at pleasure thousands of filiform worms. As he was neither able to define the genus nor species of these worms, the quantity of which, from his account, seemed to be prodigious, Frank requested to be a witness of the phenomenon. The physician administered a dose of castor oil, which procured many stools, in which were thousands of whitish filaments similar to small eels; but, on an attentive examination of these pretended worms, they were found to consist entirely of the castor oil in a state of coagulation."

Our author gives a detail of the symptoms, which it may be useful to transcribe, as he enumerates some which have not hitherto been noticed.

“ Commencing with the head, which is generally affected ; the face is tumid and pale, or even livid ; the lower eyelid becomes of a leaden colour ; an itching or sensation of tension is felt in the nose ; occasionally, the sense of smell is depraved or lost, and hæmorrhage from the nose takes place ; during sleep, the saliva runs down over the pillow ; the breath has a remarkable fœtor ; and stridor of the teeth, especially during the night, with a mucous sordes on the tongue, manifests itself ; unusual stammering ; aphonia ; loss of articulation ; strabismus ; retraction, contorsion, or fixed state of the eyes ; dilatation and immobility of the pupil ; sudden amaurosis ; moroseness ; unusual stubbornness of disposition ; frightful dreams ; cries and terror when awake ; chorea ; risus sardonicus ; vertigo, delirium, and profound stupor, are also generally present, singly or combined.

“ One of Frank’s friends informed him, that he had a patient labouring under worms, who, for a quarter of an hour, saw all objects tinged yellow. This optical illusion entirely disappeared on the expulsion of the worms.

“ The chest is sometimes affected with frequent dry cough, accompanied with tickling in the larynx ; interrupted sighs, like those of children sobbing ; anxiety at the præcordia ; acute pains, simulating pleurisy ; failure of the milk in nurses ; hiccup and other convulsive movements of the diaphragm ; with the sensation of a foreign body rising slowly from the stomach along the œsophagus. Occasionally, worms reach even the nasal fossæ or fall into the glottis, producing suffocation, of which Frank has seen one example.

“ The phenomena presented in the abdominal region may be considered as, in some respects, idiopathic. Frequently, the irritation is confined to one or two points of the intestinal tube, whilst its sympathetic effects are felt in its whole length. Occasionally, the hunger is insatiable, and accompanied with a daily progressive state of emaciation ; the appetite is variously modified, sometimes nausea, retching, cardialgia, vomiting, and expulsion of worms from the mouth, occurring ; whilst at others, borborygmi ; sudden swelling of the abdomen, now and then simulating pregnancy ; a sense of cold, gnawing or tearing, in the intestines ; inanition ; palpitations ; sensation of an extraneous body creeping, becoming elongated, or retracted upon itself ; partial tumefaction of the abdomen ; meteorismus ; eructations ; intussuscep-

tion; tormina; spasms; colic; retraction of the abdominal parietes; tenesmus; hæmorrhoidal symptoms; discharge of mucus per anum or per vaginam; mucous diarrhœa, containing very fetid black feces; the debris of rotten worms; the annuli of the tæniæ, or worms rolled in the form of a ball; obstinate constipation; derangement of the menstrual flux; abortion; whitish or thick urine; dysuria; ischuria; obstruction and inflammation of the intestines, have all been enumerated amongst the symptoms produced by the presence of worms through the nervous communication existing between the intestines and the different parts of the body.

“ M. H. Cloquet considers that the chief symptoms which indicate the presence of worms in the digestive canal, are, dilatation of the pupil; itching of the alæ nasi; sour smell of the breath; lividness or paleness of the countenance; irregular digestion; emaciation; feeling of creeping or tearing in the abdomen, and salivation.”

The symptom of perforation of the intestines he brings many facts to prove, and attributes it to ulceration, produced by inflammation. With regard to the determination of the peculiar species to which the symptoms may be owing, it is difficult to decide. The existence of the long thread worm (*tricocephalus dispar*, or *trichuris vulgaris*), the *strongylus gigas*, and the fluke worm (*distoma hepaticum*), are impossible to be known by any previous symptom. The *ascarides* and the long round worm may be determined with more certainty; the former by itching at the extremity of the rectum, tenesmus, and procidentia ani. The presence of the long round worm is known by a sense of itching in one or more points of the intestines, particularly about the navel, with their occasional appearance in the stools, and, it might be added, by dilatation of the pupil, which by some French writers is considered as peculiarly the result of this worm. *Tæniæ* are distinguished by a sense of circumgyration and twisting in the abdomen, or of pricking and gnawing in the vicinity of the stomach, great appetite, emaciation, and the discharge of joints of the worm, by vomiting or stool. Itching of the fauces, cardialgia, lipothymia, and a flow of saliva, with great itching of the fauces, are also often present.

“ All the species of intestinal worms do not offer the same resistance to the means employed by the physician; in general, the *ascarides lumbricoides* yield readily; the *oxyures vermiculares* are more difficult of expulsion; the *tænia solium* is still more obstinate; whilst the *bothriocephalus latus* (tæ-

nia lata) is almost invincible, and requires a treatment which sometimes endangers the life of the individual affected with it." "The ascarides lumbricoides, which are so common, produce more unpleasant symptoms when they ascend into the stomach than when they remain in the intestines."

"Those who are convalescent, after a severe fever or any serious disease, slowly recover their strength when affected with tænia." "After the expulsion of the worms, the symptoms frequently persist for one or two days—the agitation of the sea not being calmed immediately after the cessation of the tempest. This morbid concussion depends on the habit of being irritated which the intestines have contracted from the presence of the animalculæ; but frequently it is the effect of drastic purgatives incautiously administered, and is a condition of the system which almost merits as much attention as the worms themselves. Violent remedies favour the reproduction of the worms, and give rise to innumerable evils. An ancient French author, who has been distinguished for a treatise on Verminous Affections, affirms that, in children which succumb under convulsions occasioned by worms, death is announced by blackish stools; and he therefore maintains that black vomiting after the exit of the worms is a precursory sign of a fatal termination. These two assertions I have never had an opportunity of verifying. There are not, indeed, sufficient data on which to found a correct prognosis in cases of worms."

In the treatment of worms, the first indication of cure is the removal of the debility, and want of tone, which predisposes the individual to their formation. Pure air, simple digestible food, exercise, and the use of all those means by which the system is strengthened, should be advised, otherwise, as soon as they are expelled others will appear, and the curative means be unavailing.

With regard to the experiments which have been performed on worms, after they have been voided from the intestines, Redi found that the (lumbricoides) long round worm died speedily when immersed in salt and water, and in brandy still sooner: he proved that this species of worm possesses a tenacity of life, which is very extraordinary: of the substances enumerated, syrup destroyed them in three or four hours: in other menstrua they lived from one to two or three days. The operation of common salt is most decided, and furnishes a useful hint, particularly as, in Holland, it has been observed, that prisoners who were debarred the use of that article died of worms, which were generated in pro-

digious numbers in the stomach. In young children, who never take salt in a separate state, this fact is worthy of attention, particularly as it is generally agreeable to them. The power which the fixed oils have of destroying common insects, by obstructing the pores through which they breathe, has suggested its use as a vermifuge; it is, however, now well known that those animals have not these pores, and the noxious agency of oils, when applied to their bodies, is completely disproved. "Coulet affirms that he found the cucurbitini live as long in oil of almonds as in any other fluid. Arneman also instituted several experiments with the fixed oils, of which the following is a summary. In order to the correct knowledge of the action of the oil upon these animals, he properly advises that the oil should be tepid; otherwise the cold itself might stiffen and kill them: as even when cold oil is added to the tepid, they twist about in an extraordinary manner, and become rigid.

"Human ascarides lumbricoides, as well as those of the swine, lived several days in oil, being kept in a warm situation. They were in all cases, however, affected with restlessness and contortions; but their bodies became gradually languid and lax; the movements were executed with difficulty, and, as it almost seemed, with a sense of pain; whilst the skin was contracted into rugæ, &c."

The empyreumatic oil of Chabert, prepared by mixing one part of the fetid empyreumatic oil of hartshorn, and three of essential oil of turpentine, succeeded in destroying them in a few minutes, and has on this account been recommended by that author as a valuable vermifuge. From these results it is clearly evident, that, with the exception of the latter, a decided vermifuge is not yet discovered. It was for this reason that Dr. Heberden, whose experience was extensive and valuable, advised merely to keep the bowels in a lax state, "during which the worms might easily be submitted to, and by degrees be safely evacuated." These insects are generally so enveloped in the mucus, and other contents of the bowels, that anthelmintics gain a difficult admission to them; drastic cathartics are therefore advisable, always limiting their degree, by the debility produced by them, which would heighten the predisposition and increase of these insects. The muriate and the sulphate of soda, as being both cathartic and anthelmintic, are therefore recommended for this purpose. Calomel, aloes, gamboge, jalap, and rhubarb, singly or combined, are the next best, according to the most enlightened experience of Europe. Charcoal is highly recommended; its ef-

fect in fattening animals shows that it possesses a tonic power, and of course supports its value as an anthelmintic. Tin has been used with great success in tænia, and it has now been proved to operate not by its combination with arsenic, as it is equally effectual when administered pure, as when combined with that metal. Its dose is from half a dram to two, followed by any of the above cathartics, administered twice a week.

Of the true anthelmintics, Dr. Dunghlison observes, the oil of turpentine and the worm seed are those alone which deserve to be retained. According to Cloquet the ascaris lumbricoides, the long round worm, is treated most successfully by the following agents: 1. The aqueous decoction of the Hydrargyrum purificatum. 2. Calomel. 3. Castor oil. 4. Camphor. 5. The Veratrum sabadilla. 6. The Corsican moss. 7. Jalap. 8. The Semina santonicæ. 9. The rob of the leaves of the Juglans regia or walnut tree, and the green husk of the walnut. 10. Garlic. And, lastly, Tin.

“ M. Cloquet† affirms, that he has seen ascarides lumbricoides evacuated in a state of torpor after the abdomen of the patient had been rubbed with a mixture of ox’s gall and common soap, with the oil of tansy or of camomile, strongly impregnated with camphor and garlic, or with milk, holding aloes in solution, impregnated, secundum artem, with the bitter principle of the colocynth and camphor; or with a maceratum of bruised garlic in camphorated sulphuric ether. A similar effect, he says, is produced by the application of a plaster composed of yellow wax, litharge, assafœtida, and galbanum. He also recommends a medicament which is neither of the most elegant nor easily obtainable nature; viz. assafœtida dissolved in the gastric juice.”

We would observe that the use of the pomegranate bark in infusion, and mare’s milk, have been lately useful in tænia. With these remedies the use of tonics must be combined. The sulphate of quinine, and the preparations of iron are the best of this class, as they are also the most easily administered. This mode of treatment applies to the cure of the lumbricoides, tænia, and ascarides; as the latter are not unfrequently found in the upper part of the intestines, injections of camphor in milk are the best means of expelling them from their proper seat. Its exhibition should be premised by the administration of aloes either alone or combined with calomel,

† Leonelli, de Morbis puerorum, Cap. liii.—1544.

so as to open the bowels freely, afterwards the above injection, or a strong solution of salt in water, decoction of the semen santonicum or worm seed, of the sulphate of iron, lime water administered cold, or the oil of turpentine will succeed. Cathartics must be given twice a week, if the injections, from the restlessness of the child, be impossible, and they must be combined with tonics and other anthelmintics, of which the worm seed and the spirits of turpentine are the most valuable. The former is advised in the dose of from half a scruple to half a dram twice a day, and of the latter from half a dram to two drams, to children of two or three years, in honey, milk, or syrup, morning and night, and continued for some time after the worms are evacuated.

"The oleum empyreumaticum Chaberti was first recommended for the human subject by Bremser. It is prepared from one part of the fetid or empyreumatic oil of hartshorn and three of the essential oil of turpentine. These are well mixed together and suffered to remain at rest for four days; after which they are distilled in a sand bath until three-fourths of the liquor has passed over. This is directed to be kept in a bottle with a well-secured glass stopper, and to be preserved from the rays of light. The following is the mode of treatment which Bremser employs against the different species of worms, especially the *Tænia solium*, occurring in adults; the first step being the same which Frank has adopted for the last thirty years, with the most decided advantage.

"He commences with the following electuary:

R. *Seminum cinæ (santonicæ) aut tanacetii*
vulgaris, ruditer contusorum, ʒss.
Pulveris radices valerianæ sylvestris, ʒij.
———— jalapæ, ʒss vel ʒij.
Potassæ sulphatis, ʒiss vel ʒij.
Oxymellis scillæ, q. s. ut fiat electuarium.

The patient is recommended to take two tea-spoonfuls of this remedy twice or thrice a day until the whole is consumed.

"When this is finished, he gives, morning and evening, two dessert spoonfuls of the empyreumatic oil, and directs the mouth to be rinsed afterwards with a little water. Should the oil act too powerfully on the nervous system, or on the bladder, the dose must be diminished. According to this plan, about two ounces and a half will be taken in the space of ten or twelve days. The following purgative is then exhibited:

R. Pulver. radicis jalapæ, ʒj.
 Folior. sennæ, ʒss.
 Potassæ sulphatis, ʒj. Miscæ.

This powder is directed to be taken every hour until full evacuations are produced ; after which the oil must be again resumed, and persisted in until four, five, six, and even eight, ounces shall have been taken, according to the difficulty which may be experienced in expelling the Tænia or other Entozoa. Bremser confesses that this treatment is somewhat protracted ; but he affirms that it is certain, free from danger, and that, by following the rules inculcated, there is never need of any secondary treatment.

“When, however, a marked disposition to the generation of worms exists, he recommends the use of the following drops :

R. Tinct. aloes comp. ʒj.
 — ferri pomati† ʒj.
 Elixir. Vitriol. ʒss. M.

Ten, twenty, or thirty drops of this mixture may be given three or four times a day in a glass of wine or water.

“The above is the treatment generally pursued, by the celebrated Helminthologist above alluded to, in cases of the ascarides lumbricoides and tæniæ, especially of the latter, when infesting the adult frame. To the younger portion of mankind it may also be appropriated, by a proper regulation of the doses. The great objection, however, to these, as well as to all other terebinthinate remedies, is, the difficulty of inducing children of a tender age to swallow them. This difficulty may, however, be frequently overcome ; admixture with honey, sweetened milk, &c. considerably shielding their nauseous flavour.” “Bremser considers that some vermifuge property resides in the animal oil which is combined with the oil of turpentine to form Chabert’s empyreumatic oil ; nor does this seem improbable. Rudolphi asserts that he has frequently employed Dippel’s animal oil, which is nothing more than the oil of hartshorn, with advantage, in the dose of from three to ten drops, three times a-day, to adults. The simple oil of turpentine will, however, be gene-

† “The tinctura ferri Pomati of the Berlin Pharmacopœia is thus formed :

R. Ferri rubig. in pulv. trit. ℥j.
 Succi malorum acerb. ℥iv.

Macera per dies quosdam, et, lento igne, consume donec crassitudinem extracti habeat. Hujusce extracti uncias duas in aquæ cinnamomi spirituosæ octariis duobus liqua.—*Conspectus de Pharmacopœis de Dublin*, &c. p. 489.

rally found sufficiently successful, if administered in the manner, and with the adjuvants, before mentioned."

On Constipation.

The retention of the meconium, sometimes followed by tetanus, &c. forms the subject of the next chapter. This substance, proved by the experiments of Vauquelin and Bouillon Lagrange to be a mixture of mucus with bile, gives rise, from its pertinacious adherence to the surface of the intestines, to considerable disorder in the alimentary canal—tormina, flatulence, and indigestion. As the following remarks contain a digest of the latest experience, we give it without comment, though it consists principally of the usual plan. For its expulsion in general, the colostrum or first milk of the mother is sufficient. A few grains of rhubarb, a tea-spoonful the syrup of roses, of castor oil, answers, where the milk fails to evacuate it. A laxative glyster, a mixture of butter and soft sugar may also be tried: a suppository of yellow soap succeeds where injections are ineffectual. This disease is more effectually relieved by the use of stimulating matters thrown into the rectum, than in any other mode, as it appears from dissection that the meconium occupies almost entirely the larger intestines, the smaller being filled with a light-coloured bilious fluid: purgatives too exhibited by the mouth, from the superabundant mucus with which the intestines are lined, pass freely, without either increasing their secretion, or the peristaltic motion. In administering injections, it should be recollected, that they should not be given too hot, as they are liable to increase the mischief; a mistake which is often made.

"Constipation in some infants is an hereditary affection, and is, of course, in such cases, natural to the child; but although, when it does not exceed proper bounds, it may not require the use of any remedy; yet, when the health begins to suffer, or colic, flatulence, &c. show that it is proceeding to an injurious extent, it ought to be carefully attended to, as it may occasion convulsions, inflammation of the bowels, or other serious mischief. Where the predisposition has descended from a mother of the same habit, the tendency to it cannot be removed by the exhibition of any remedy to the child; the constipation may be temporarily obviated, but it will always recur. Under such circumstances, where practicable, the milk should be changed; and, if it can be accomplished, the change should be made for that which is not so old. In

young females, however, it becomes a matter of considerable importance that they should suckle their infants, in order to prevent the too rapid succession of children. In those cases, the only thing to be done is for the mother to have recourse occasionally to a brisk purgative, to alter, if possible, the quality of the milk; to let her diet consist of those substances which have an aperient tendency; and to take, habitually, small doses of some saline aperient. The infant should also be occasionally fed on arrow root, veal soup, barley-meal porridge; water or beer sweetened with brown sugar or treacle; and castor oil, magnesia, syrup of roses, manna, or any mild purgative, may be occasionally exhibited."

When the constipation originates from the disagreement of the child's food, it must be changed; and if that does not succeed, after trying mild cathartics, the administration of aloes in powder, in obstinate cases, is recommended as the best remedy. In general, senna, jalap, scammony, calomel, alone or in combination, also are useful; and if they fail, the warm bath and leeches to the belly, or friction on its surface, by the hand, or with the linimentum camphoræ, is useful.

A case of obstinate constipation is then related, in which the patient took two drams of powdered aloes in two days, without any unpleasant effect; another in which three drams were given; a third where injections, with calomel and jalap in the dose of one grain of the former to four of the latter, four times a day; scammony and jalap with senna, and finally, by the eighth day, two drachms of aloes were taken, and the child was relieved of the constipation and fever, which had grown to an alarming height.

The following formula is used by M. Jadelot, Physician to the hospital des Enfants, Paris, who considers it as invaluable:

"R Fol. Sennæ, dr. iij.
Sodæ Sulphatis, dr. ij.
Mannæ, oz. j.
Aquæ, oz. iv.

Sennam in aquâ bulliente per horæ quadrantem infunde, tum cola et adde Salem et Mannam.

A spoonful of this mixture is administered repeatedly, until evacuations are produced."

Acidity, Flatulency, and Colic.

With regard to the first, its causes are "exposure to cold, especially at the child's feet; improper food; irregularities

in the diet of the nurse, and the custom of giving the breast too frequently to children.

On each of these heads, though the author advances nothing absolutely new, yet the minuteness and precision of his practical details render his observations extremely valuable.

Colic occurs most commonly in early childhood in the first six weeks, to the tenth and twelfth month ; and is known "by hardness of the abdominal muscles, kicking and drawing up of the legs, and is frequently attended with suppression of urine."

It is usually accompanied by diarrhœa or constipation, and proceeds from flatulence or saburral matter contained in the bowels. "These cases are more dangerous than when moderate diarrhœa is a concomitant, and, when the symptoms run high, especially if any pyrexia be present, require topical bleeding, cathartics, and cathartic clysters, warm bathing or warm fomentations to the belly, and friction with the linimentum saponis to which a fourth part of the tinctura opii has been added. M. Alphonse Leroy has recommended, in those cases, the exposure of the child's belly to a flaming fire, and rubbing it with warm flannels; both of which, of course, act on the principle of common fomentations."

When the colic is slight and arises from flatulence, "the opiate friction, with any of the ordinary carminatives, as a drop or two of the essential oil of aniseed, caraway, or peppermint, by stimulating the stomach and increasing the peristaltic action of the intestines, will expel the flatus and thus afford relief. But where it originates from acidity, as may be partly recognised by the bowels not being confined and the motions possessing a green colour and sour smell, in addition to the above means, the exhibition of magnesia will correct the acidity, and aid the expulsion of the offending matter from the bowels. For this latter purpose, it may be occasionally necessary to use a suppository where the infant is suffering much from pain."

"When the paroxysm has been removed, the remaining indication consists in removing the cause, and thus preventing its recurrence. For this purpose, it is necessary to attend, not only to the child, but also to the nurse. Where the nurse is regular in her diet, and her milk seems good, especially if the child be of a fat and flabby make, there is reason to believe that a great portion, if not the whole, of the evil resides in the latter : and the means must consequently be more especially directed to it, whilst at the same time the diet of the nurse may be so regulated as to assist in this object."

When acidity or flatulence form the prominent symptoms the same preventive treatment is pursued. "A little magnesia may every now and then be administered; the preparations of cinchona, especially the watery infusion or syrup; or very mild doses of the alkaline base of that bark, as of the syrup of quinine, or of the infusion of calumba, or of gentian, may be exhibited. An excellent remedy, however, is contained in the infusion of rhubarb, in regulated doses, given so as to keep the bowels gently open, whilst at the same time it communicates tone to the stomach and bowels, and increases the peristaltic action. The child should be kept warm, and a flannel roller be applied round the abdomen, which gives support to the muscles, and is a valuable auxiliary in diseased conditions of the intestinal canal.

Where the child is at the breast, considerable attention must be given to the diet of the nurse. If she have been irregular in her living, the cause of the child's complaint may be wholly centred in her; or, whilst living with the utmost regularity, her milk may prove flatulent or difficult of digestion. Porter, acids, and acescents, have been found, in many instances, to be the manifest cause of the mischief; all the symptoms having disappeared immediately on their ablation. They should therefore be interdicted, and a little wine and water, or weak spirit and water, be substituted. She should also take, occasionally, some absorbent laxatives, as magnesia, and avoid as much as possible every thing which she has found to disorder her digestive organs. Where there is reason to suppose that the child's food is not proper for it, it had better be kept solely on the breast milk for a time."

"Professor Gardien recommends that the diet of those children which are subject to colicky complaints, should consist of a *bouillie* formed of well-torrefied flour. Under the use of this food, he has found the gripings and green colour of the excretions gradually disappear.* It is an article of diet much used in this country for children in a state of health, and in general agrees very well with them."

Diarrhœa.

Regarding this disease as the most common affection of childhood, and from the sudden vicissitudes of this climate,

* "J'ai expérimenté plusieurs fois que les tranchées et couleur verte des excréments ont disparu par l'usage seul de la bouillie, chez les enfans qui n'en usoient pas auparavant."—GARDIEN.

peculiarly so, it deserves great attention. In health, the colour of the stools "is commonly that of a bright orange; the consistence pulpy and curdled, and the smell not offensive. During this period it has usually from two to four motions, or more, in the course of the twenty-four hours. At an after period, however, whether or not it may have been permitted the use of meat, the stools are of a more brownish yellow colour, greater consistence, and of an offensive, but healthy, smell, which must be familiar to every one."

Our author observes, that in diarrhœa the evacuations are various, sour and curdled, slimy, "mucous, green, pale, clayey, watery, and bloody; some of which, especially the three last, are now and then extremely fetid. From the precise appearance of these, a good or bad prognosis has been deduced: but although this circumstance may inflect us considerably in the formation of our opinion, the degree of danger is more to be drawn from the state of the concomitant symptoms than from the dejections themselves. 'Diarrhœa,' as Mr. Burns has correctly observed, 'appears under various circumstances, not only with regard to the nature of the stools, but their frequency, the pain which attends them, the character of the complaint, and the effect on other parts. In some cases the stools are extremely frequent and uniformly so. In others, the dejections come in paroxysms, being worse either through the night or through the day. Some children are greatly griped; others are sick, oppressed, and do not cry, but moan. In severe cases, the stomach is very irritable, rejecting the food; but it is not equally so in every stage of the disease, though the stools be the same in frequency. The appetite is more or less impaired, and in bad cases the aliment quickly passes off; and every time the child drinks, it is excited to purge. The mouth, in obstinate bowel complaints, generally becomes aphthous, and the anus excoriated or tender; and it is not uncommon for the feet to swell. Sometimes the child is flushed at certain times of the day, or the face is uniformly pale, and the skin waxy in appearance. In general, if the disease be severe, a considerable degree of fever attends it; and a continued fever in this disease is always unfavourable. The stools may come away with much noise from wind, or may be passed as in health. When there is great irritation, they are either squirted out forcibly, or come in small quantity, with much pressing. Diarrhœa sometimes proves fatal in forty-eight hours; but it may be protracted for several weeks, as is often the case

when intussusception has taken place.* In such protracted cases, the emaciation is prodigious, the face is lank, the eyes sunk, and the expression anxious: the strength gradually sinks, the eyes become covered with a glossy crust, the extremities cold, the respiration heaving, and the child dies completely exhausted.

"One of the most dangerous varieties of diarrhœa, is that to which the rude term of *watery gripes* has been commonly given, 'non ex rei essentiâ cui primum et maximè medemur, sed ex eo quod forte primum occurreret.' Underwood has included this severe form under the term 'Lientery or Watery Gripes;' but these terms are by no means synonymous; for, although the food or drink rapidly passes through the little sufferer, it appears generally to have undergone some change; and, as Dr. Hamilton very properly observes, resembles moss-water. From the first moment of the commencement of this variety, the stools are very watery and frequent; the child is extremely restless; the skin dry; the features very soon become pinched; the emaciation and prostration of strength are excessive; and if the disease be not speedily put a stop to, it soon terminates fatally."

He then describes the disease called in France the *Maladie de Cruveilhier*, or the Weaning Brash, of Cheyne, which deserves to be noticed. The first stage may persist from eight days to two months. The second continues from three to fifteen days. "It commences almost always by nausea or by continual vomiting, with a cough avec regurgitation, as in whooping cough. When the seat of the disease is confined to the intestines, the stools become always more frequent, assume a putrid smell, are green, and similar to chopped grass. The colour indicates the secretion of a large quantity of bile, as the food stays so short a time in the intestinal canal, that it could not be so much impregnated with it, did it only flow in its ordinary quantity."

"Frequently after repeated vomiting, the child becomes cold, and falls into a sort of syncope. The pulse is slow and irregular, both in frequency and strength; the extremities are cold, and the intellectual faculties in the most perfect state of integrity, a condition which they retain until the last

* "This observation of Mr. Burns is extremely questionable. When intussusception has once taken place, it is not probable that the disease is ever very considerably protracted. The constant state of irritation kept up in the mucous membrane, with the obstruction of the bowels, generally occasions so much organic mischief, as to speedily draw on a fatal termination.

moment; the child is excessively peevish; every thing, even looking at it, distresses it. It is extremely restless, and unable to hold up its head. Subsequently, stupor occurs; cadaverous countenance; eyes half closed and turned upwards; sometimes slightly open and fixed; grinding of the teeth; increasing cold over the whole surface of the body, and especially of the extremities; emaciation extending to the highest degree in the space of twenty-four or forty-eight hours. Finally, after appearing to be better for half a day, a whole day, and sometimes for several days, the dangerous symptoms augment, and the child sometimes succumbs after a violent crisis; at others in a gradual manner."

The appearances on dissection are inflammation of the lining membrane; in general those who die of a long and continued diarrhœa present the mucous coat pale and of its usual consistence; sometimes infiltrated with serum; and the substance of the intestines frequently excessively attenuated.

"In this condition, the intestine seems to be incapable of fulfilling its functions; chylication is imperfectly performed; absorption becomes much less active; and the food is frequently voided in the same state as when taken; constituting what the ancients termed '*lientery*.'"

"The mucous coat of the intestines may, therefore, like many other tissues, be the seat of a much more than ordinary secretion, although it presents no trace of inflammation. In like manner, during convalescence from chronic diseases, the exhalation of serum into the sub-cutaneous cellular tissue is augmented; and it was consequently not without reason that Sauvages designated a particular class of diseases under the name of flux."

Sometimes tubercles are formed below the mucous membrane, exciting irritation in their progress to suppuration, and thus increasing the secretion of the lining membrane and the peristaltic motion.

"There can be no doubt, however, that, in a very great majority of cases, the intestines of those labouring under diarrhœa, complicated or not with dysenteric symptoms, present evident marks of inflammation, which may be seated either in the small or large intestine. In the small intestine, it frequently exists only to the extent of a few fingers' breadth above the ileo-cæcal valve: at other times, a larger portion of the intestine is attacked with it, under the form either of a simple injection of the mucous coat, alteration of its texture, red or white ramollissement, or ulceration. Numerous

cases have convinced me, the acute or chronic diarrhœa is the frequent result of isolated inflammation of the small intestine, without the large at all participating in it. This fact I dwell upon, because M. Broussais has laid it down, as a general principle, that inflammation of the small intestine is accompanied with constipation, and that diarrhœa only supervenes when such inflammation is complicated with inflammation of the colon. Of the three portions of the great intestine, the cæcum, in diarrhœa, most frequently presents one of the three degrees of inflammation; after the cæcum, the colon, and, finally, the rectum."

It has been customary to refer to inflammation the symptoms of dysentery exclusively; this however is an error, for bloody and slimy evacuations appear in individuals, whose intestines after death are found accurately to resemble those of patients who had died of evacuations purely watery; ulcerations of the colon have accompanied constipation and diarrhœa. In inspecting the mucous coat of the intestines great mistakes are liable to occur, as in some cases the mucous follicles, "from being considerably developed, form an elevation possessing a central depression, which has induced pathologists of considerable eminence to pronounce the internal membrane ulcerated; but when this has been carefully separated from the muscular coat, no solution of continuity has been perceptible. The anatomical characters of inflammation of the digestive tube, are, by M. Andral, divided into three varieties. In the first there is simply a greater or less degree of injection of the mucous coat; in the second, a thickened, softened, or exanthematous alteration of its texture—a morbid condition which may or may not extend to the other tunics; and in the third, the mucous coat and subjacent tissues become disorganized and ulcerated.

"The second and third varieties are not so likely to be mistaken as the first.

"As sero-sanguineous engorgement of the lungs, says M. Andral, which has supervened only during the latter periods of life, may be easily confounded with the first stage of pneumonia; so may the mechanical stasis of the blood in the mucous coat of the digestive organs, or beneath it, be mistaken for an inflammation of these parts. I shall endeavour to make some observations which may prevent us from committing a similar error. Whenever, a few hours before death, the return of the venous blood towards the right cavities of the heart has experienced considerable interruption, the parietes of the intestinal canal are found in several parts

more or less injected. The obstacle to the return of the blood towards the heart, may be seated either in the heart itself or in the lungs. In either case, the blood, which no longer enters these two organs with facility, reflows towards the liver, which becomes engorged in its turn, and is no longer able to admit that which is brought to it by the vena porta. The ramifications of this vein consequently remain filled, whilst they at the same time receive a fresh quantity by the arteries until, and sometimes even after, death. Hence proceeds the injection of the parietes of the intestinal canal."

"This injection, continues M. Andral, is more vivid and common than in any other part, in consequence of the number and size of the vessels or its vicinity to the liver, into which the greater portion of the blood received by the right side of the heart, even that which is brought to it by the vena cava superior, reflows and accumulates as in a reservoir. If, in fact, as I have seen done by M. Magendie, we inject sulphuric acid into the jugular vein of a living animal, the hepatic vessels will be found filled with coagulated blood. It is only when the engorgement of the right side of the heart and of the liver has reached to a very great extent, that the other parts are also found injected after death. At such times the skin is marbled with livid streaks; the membranes of the brain are of an intense red; the brain itself is covered with an infinite number of small red points; an enormous quantity of blood streams out from all the parenchymatous tissues; the intermuscular, sub-serous, and sub-arterial, cellular tissues, are overrun by a multitude of small vascular ramifications, &c. But the purely mechanical injection of the intestinal parietes presents several degrees. In the mildest variety, the cellular tissue beneath the mucous coat is found overrun by large veins filled with black blood, which give to the stomach, when viewed internally, a marbled appearance, and, owing to their multiplied anastomoses, form numerous arborizations in the intestines: they exist in great quantities in the folds of the small intestines, which, being deeply situated in the concavity of the small pelvis, from their depending position, offer a fresh obstacle to the return of the blood. The first degree, consisting in an injection of the great vessels of the sub-mucous tissue, must not be confounded with the inflammatory injection which is seated in the vessels of the mucous membrane. But in the second degree, besides these veins gorged with blood, the cellular tissue presents a multitude of small, vascular, ramifications, extending, in several parts, to the mucous coat, which, at such

tion. Dr. Cheyne concluded, from these appearances, that the disease was owing to an increased secretion of acrid bile, or rather to the morbid state of the liver occasioning this; and that the extremely irritable condition of the whole abdominal viscera, marked by the spasmodic contractions, intussusceptions, &c. was occasioned by the presence and passage of this acrid excretion. It is not, however, by any means improbable, but that deranged states of the biliary system may be, and generally are, occasioned by a previous inflammation or irritable condition of the mucous coat of the intestine; any irritation in the digestive tube will occasion an increased flow of bile; and it is extremely doubtful whether any purgative has an effect on the biliary secretion, except indirectly, through the medium of the intestinal canal. It is a law in the animal economy, to which there are few, if any, exceptions, that secretions do not irritate the parts over which they have to pass, whilst those parts are healthy; but so soon as they become inflamed, the same fluid, which was previously bland and harmless, becomes the source of intense irritation."

In order to decide upon the existence of inflammation, the symptoms during life must be taken into the account; pain (particularly if increased on pressure), restlessness, drawing up of the legs, screaming, moaning, hot skin, frequent and hard pulse, slimy membranous and bloody stools, certainly decide that this state exists. Inflammation however may exist without pain, and frequently pain will occur from spasm or the presence of irritating matters without any inflammation. Tubercles in the intestines sometimes run their whole course of inflammation, suppuration, and ulceration, without the least pain. The same exception also occurs with regard to the bloody evacuations; they are also unattended with inflammation; in general, however, the directions above given are the best for determining its existence.

Watery stools, inclining to green or to yellow, attend ulcerations of the intestinal tube, as well as cases in which it is simply pale, thin, and dematous.

The use of spoon victuals is commonly the cause of this disease; as it rarely occurs in those who are continued at the breast: on this account it has been denominated the *weaning* brash by Cheyne: M. Cruveilhier referred it also to the same cause.

"It may also be produced by the milk of the nurse not agreeing with the child, owing to its being too old, or changed by some emotion with which she has been impressed, or by some

alteration which she has undergone in her sexual relations, or by improper food. It may likewise be occasioned by the irritation of teething, acting sympathetically on the mucous surface of the intestines, or by cold, suppressing, in all probability, the insensible perspiration, and occasioning a sympathetic inflammation of the mucous tunic. In older children, the causes are, generally, improper diet of some kind, especially of acescent fruits in their season; or, inordinate quantity of any food; suppressed perspiration; or moral emotions.

“Previous constipation, by irritating the mucous coat, or a delicate condition of the bowels natural to the individual, or too active purgatives, may likewise occasion diarrhœa in children of any age.

“Redundancy, and improper quality of the bile, has, by many authors, been considered to produce diarrhœa; but it is by no means established whether such redundancy ought not rather to be considered in the light of an effect than of a cause. Greenness of the stools is no positive proof of the bile being vitiated; almost all acids occasion a green precipitate on admixture with the biliary secretion; and it is probable that the green evacuations in children are almost always occasioned rather by a predominance of acid in the chyme, than by any altered condition of the bile itself.”

With respect to the prognosis, “if the child be fretful, restless, and in pain; if the countenance be much altered and pinched, whilst the complaint is still persisting; if the breathing be uneasy, and the emaciation sudden and progressive, with the skin hot and dry; the abdomen painful on pressure, and much thirst present; the symptoms must be considered unfavourable. Excessive loathing of food, or great voracity of appetite, are extremely dangerous.”

It may readily be conceived, from the details of the dissections above given, that the treatment of this disease must be very uncertain, as the precise morbid condition of the canal cannot be discovered. As, however, it may terminate in some permanent lesion and death, it should be immediately treated with attention.

“In the milder cases of diarrhœa, the treatment is extremely simple. Where the stools of the infant are of a light-green colour, and sour smell, the disease is generally dependent either upon improper quality or quantity of nourishment or weakened power of the child’s digestion. The diet must, consequently, be regulated in the manner hereafter to be described, and those plans of treatment adopted which have

times, presents, at greater or less distances, patches of a brownish red, formed by the agglomeration of numerous, almost capillary, vessels, strongly injected. When less numerous, they form small, red, isolated, or united, points in the mucous coat; and when more so, long red or brown bands."

Effusions of blood, with or without injection of the mucous coat, are found in the cellular membrane; in which latter case, when it exists in the highest degree, the blood exhales from its surface into the intestine.

"This sanguineous exhalation, connected with interrupted circulation, is also observed in other parts. The tissue of the lung, the substance of the brain, and those parts of the skin which are deprived of epidermis, occasionally become the seat of it, in individuals labouring under aneurism of the heart. The bronchi are frequently filled with a bloody fluid during the last moments of the life of phthisical patients who have undergone a long agony."

All the phenomena thus detailed may be artificially produced during life. When they are slowly deprived of life, the alimentary canal, which is pale, or of a rosy white, in the natural state, is observed to become injected and considerably reddened.

"A vivid coloration of the intestines may be also obtained by tying the trunk of the vena porta. This fact was known in the time of Morgagni; who relates, that, after the ligation of this vein, the intestines quickly acquire the colour of cochineal, and a sanguineous exhalation sometimes takes place at their internal surface.

"From the whole of the preceding facts, it results that, when any stimulus, applied to the intestines, has merely occasioned their injection, without their texture being altered, it is frequently difficult, and sometimes impossible, to distinguish this inflammatory injection from that which has been produced in a purely mechanical manner. It becomes, at such times, necessary to attend not only to the symptoms which have preceded, but even to the kind of, death; to observe the state of the lungs, of the right side of the heart, of the liver, and of the system of the vena porta; and after all, in many cases, we must be still compelled to remain in doubt.

"Neither must the redness, which is observed around the large veins distributed in the sub-mucous tissue, be taken for a product of inflammation. This condition is almost constantly met with, when the dissection has not taken place until after twenty-four hours from the time of death. It is ob-

served under the form of long and narrow bands, which follow the direction of the veins, and are the mechanical results of the transudation of the blood through the parietes of the veins. They may be produced by subjecting a stomach whose vessels are full of blood to putrefaction."

These facts, we would observe in passing, show, in addition to those quoted in a former number from Yelloly, who observed a full injection of the vessels of the stomach in a man who had been hanged, as also those of Parrish and Seeds, who had observed in animals bled to death the same appearances, the uncertainty of the existence of inflammation of the intestines, and certainly, as we then observed, show the insufficiency of the doctrine of Broussais, which attributes the origin of many diseases to inflammation of the intestines, since it may be the result of the action of the vessels alone.

With regard to the epidemic described by Cruveilhier, as also in the Weaning Brash of Dr. Cheyne, after death the appearance were as follows: "a gelatinous (*gélatiniforme*) disorganization, and thickening of the coats of the intestine, both with and without perforation. Sometimes this was seated in the small intestine; at others, in the large; but almost always the stomach was observed to be affected at the same time, along with one or other of the intestines. M. Cruveilhier remarks, that in the part where the *ramollissement* was situated, there was no trace of inflammation, nor any alteration of its colour; but he afterwards mentions a black tint of the vessels surrounding the alteration, and occasionally communicating itself to the disorganized parts, and the contained fluids. At the internal surface of the canal, he also found several projecting, irregular, thick, and, as it were, stamped patches. All these appearances, however, and especially the gelatinous disorganization, were, in all probability, the results of previous inflammation: the unquenchable thirst, with the restlessness, signs of continual pain and uneasiness, were strong evidences of the existence of such a condition, of which the *ramollissement* was probably a termination."

"In every case the intestinal canal, from the stomach downwards, abounded with singular contractions; and had, in its course, one or more intussusceptions; the liver was exceedingly firm, larger than natural, and of a bright red colour; and the gall bladder, which was enlarged, contained a dark-green bile. In some dissections, the mesenteric glands were found swelled and inflamed: in others, however, they were scarcely enlarged, and had no appearance of inflamma-

tion. Dr. Cheyne concluded, from these appearances, that the disease was owing to an increased secretion of acrid bile, or rather to the morbid state of the liver occasioning this; and that the extremely irritable condition of the whole abdominal viscera, marked by the spasmodic contractions, intussusceptions, &c. was occasioned by the presence and passage of this acrid excretion. It is not, however, by any means improbable, but that deranged states of the biliary system may be, and generally are, occasioned by a previous inflammation or irritable condition of the mucous coat of the intestine; any irritation in the digestive tube will occasion an increased flow of bile; and it is extremely doubtful whether any purgative has an effect on the biliary secretion, except indirectly, through the medium of the intestinal canal. It is a law in the animal economy, to which there are few, if any, exceptions, that secretions do not irritate the parts over which they have to pass, whilst those parts are healthy; but so soon as they become inflamed, the same fluid, which was previously bland and harmless, becomes the source of intense irritation."

In order to decide upon the existence of inflammation, the symptoms during life must be taken into the account; pain (particularly if increased on pressure), restlessness, drawing up of the legs, screaming, moaning, hot skin, frequent and hard pulse, slimy membranous and bloody stools, certainly decide that this state exists. Inflammation however may exist without pain, and frequently pain will occur from spasm or the presence of irritating matters without any inflammation. Tubercles in the intestines sometimes run their whole course of inflammation, suppuration, and ulceration, without the least pain. The same exception also occurs with regard to the bloody evacuations; they are also unattended with inflammation; in general, however, the directions above given are the best for determining its existence.

Watery stools, inclining to green or to yellow, attend ulcerations of the intestinal tube, as well as cases in which it is simply pale, thin, and dematous.

The use of spoon victuals is commonly the cause of this disease; as it rarely occurs in those who are continued at the breast: on this account it has been denominated the *weaning* brash by Cheyne: M. Cruveilhier referred it also to the same cause.

"It may also be produced by the milk of the nurse not agreeing with the child, owing to its being too old, or changed by some emotion with which she has been impressed, or by some

alteration which she has undergone in her sexual relations, or by improper food. It may likewise be occasioned by the irritation of teething, acting sympathetically on the mucous surface of the intestines, or by cold, suppressing, in all probability, the insensible perspiration, and occasioning a sympathetic inflammation of the mucous tunic. In older children, the causes are, generally, improper diet of some kind, especially of acescent fruits in their season; or, inordinate quantity of any food; suppressed perspiration; or moral emotions.

“Previous constipation, by irritating the mucous coat, or a delicate condition of the bowels natural to the individual, or too active purgatives, may likewise occasion diarrhœa in children of any age.

“Redundancy, and improper quality of the bile, has, by many authors, been considered to produce diarrhœa; but it is by no means established whether such redundancy ought not rather to be considered in the light of an effect than of a cause. Greenness of the stools is no positive proof of the bile being vitiated; almost all acids occasion a green precipitate on admixture with the biliary secretion; and it is probable that the green evacuations in children are almost always occasioned rather by a predominance of acid in the chyme, than by any altered condition of the bile itself.”

With respect to the prognosis, “if the child be fretful, restless, and in pain; if the countenance be much altered and pinched, whilst the complaint is still persisting; if the breathing be uneasy, and the emaciation sudden and progressive, with the skin hot and dry; the abdomen painful on pressure, and much thirst present; the symptoms must be considered unfavourable. Excessive loathing of food, or great voracity of appetite, are extremely dangerous.”

It may readily be conceived, from the details of the dissections above given, that the treatment of this disease must be very uncertain, as the precise morbid condition of the canal cannot be discovered. As, however, it may terminate in some permanent lesion and death, it should be immediately treated with attention.

“In the milder cases of diarrhœa, the treatment is extremely simple. Where the stools of the infant are of a light-green colour, and sour smell, the disease is generally dependent either upon improper quality or quantity of nourishment or weakened power of the child’s digestion. The diet must, consequently, be regulated in the manner hereafter to be described, and those plans of treatment adopted which have

been detailed under the head of *Acidity and Flatulence*. Under this practice, the disease will generally subside."

Where there is little or no irritation of the system, as the evidence of local inflammation is always uncertain, the plan must be in some measure empirical; rhubarb, magnesia, castor oil, rhubarb and calomel, to remove irritation, should be given, and as these purgatives are mild, they are safe, since they have no tendency to increase the inflammation, should it be present. These means must be repeated if the disease should continue undiminished, and the evacuations offensive, or unnatural. After they have improved, frictions of laudanum to the belly, with the chalk mixture, will be proper, with occasional injections of starch and laudanum; these last, however, are particularly useful in the violent cases. "Great benefit has also been occasionally found to accrue from the use of a mixture composed of twenty grains of toasted rhubarb, two drams of prepared chalk, a table-spoonful of brandy, previously set fire to and allowed to burn as long as any spirit remains, and three table-spoonfuls of water; the dose being from one to two tea-spoonfuls every hour or two while awake. Stimulating friction may also be employed, and the application of a flannel bandage round the abdomen is generally serviceable.

Though inflammation is always doubtful from the state of the symptoms, it must be observed, that slimy stools, with heat, thirst, a white, red, or dry tongue, the abdomen painful on pressure, most probably denote its existence, and when these symptoms exist, active cathartics are decidedly improper: they not only endanger the increase of inflammation, but also intussusception. The warm bath, emollient fomentations, drinks and glysters, are recommended by our author, and by the continental practitioners, leeches to the anus, as the most certain means of removing the inflammation. We would observe, that when these general symptoms of constitutional irritation are present, the use of depletion should always be premised, and as soon as it has been removed, the mild diluent laxatives, with a continuance of such a plan as will obviate any phlogistic tendency, will succeed; and the earlier the depleting means are used the better: the application of a few leeches to the anus appears so empirical in its mode of prescription, that most physicians, who do not attend to the state of the system, will prescribe it as a part of a system without regarding the symptoms which indicate, or the results which follow it: sometimes a sudorific effectually relaxes the surface, and renders v. s. unnecessary; in other

more violent cases, bleeding, both local and general, will be proper.

Some remarks on the dangerous variety of intestinal disease, called the watery gripes, are made by Dr. Dunglison, which are extremely valuable; particularly, as in that disease, it is difficult to lay down any settled plan of treatment, to be generally pursued. "Whilst many practitioners strongly inculcate the necessity of repeated purging, on a presumption of the cause being referrible to the presence of irritating matter in some portion of the intestinal tube; others, equally exclusive, imagine it to be owing to an inflammatory condition of the mucous tunic, and to require the use of sedative remedies only. Were the causes properly appreciated, both classes of practitioners would probably be found occasionally right, and both occasionally wrong. I have sometimes witnessed cases in which there has been every reason for supposing that some accumulation had taken place in the cæcum or small intestines; and where the increased peristaltic action, which had been the consequence, had produced irritation of the mucous coat, and augmented secretion of fluid by the exhalants. In such instances, of course, the affection could not be annihilated until after the removal of the offending matter. In other cases, purgatives have appeared to afford no relief, and the disease has rapidly yielded to the use of anodynes, and the testacea. Opiates should, however, be administered with the greatest caution. I have myself lately witnessed two cases, in one of which a dram of the syrup of poppies, and in another a powder containing a quarter of a grain of opium, proved fatal to young infants; and a case is referred to by the late Dr. Clarke, in which forty drops of Dalby's carminative was attended with equally disastrous results."

"The great difficulty, in the treatment of watery gripes, is to properly discriminate the cases in which purgatives are to be advised, from those in which they should be carefully abstained from. In general, where the child is suffering from copious, watery, stools, without there being much pyrexia, or pain of the abdomen on pressure, present, a dose of some brisk cathartic, as calomel joined with rhubarb, scammony, or jalap, may be usefully administered; but should symptoms of abdominal inflammation be concomitant, the more gentle laxatives, as cold-drawn castor oil, rhubarb and magnesia, or syrup of senna, should be preferred, merely for the purpose of emptying the upper portions of the intestinal tube of any irritating matter which may be present. To fulfil a similar indication as regards the super-diaphragmatic portion of the

digestive canal, an ipecacuanha emetic may be advisable. If, under this treatment, the stools become improved in appearance, and less frequent, the laxatives may be gradually decreased until they are finally abandoned altogether.

“Should the symptoms not yield to the aperients, the frequency of the stools being much increased without their character being altered, whilst the powers are rapidly sinking, the warm bath, fomentations, and anodyne friction, may be occasionally used, and an opiate clyster be given repeatedly during the day in regulated doses; whilst the pulvis cretæ compositus, or any testaceous preparation, may be administered internally.

“By this plan, though the stools are unnatural, the inordinate secretion may be arrested, and then gentle laxatives may subsequently carry off the offending matters.”

Another variety of the disease adduced by Professor Hamilton, is then described, which from its fatality deserves the attention of the profession. It consists of a discharge of “white, clay-coloured, stools, as if powdered chalk had been mixed with them, having a most offensive smell, being passed in a great quantity relatively to the food taken in, and rapidly reducing the flesh and strength.”

When diarrhœa originates or is complicated with other affections, a palliative plan only is possible, (opiates in enemata, cretaceous medicines, rhubarb, and magnesia,) till the complications or causes are removed.

When the food passes unchanged through the bowels, it is generally dependent upon some disease of the mesenteric glands, or great debility of the chylopoietic viscera, the food passing before the function of digestion takes place. It then becomes necessary to rouse the digestive function, and stimulate the whole alimentary canal: for this purpose Dr. Dunghlison advises the use of the infusion of rhubarb, the aromatic confection, the aromatic spirit of ammonia, with clysters of opium, and a regulated diet.

In chronic diarrhœa the plan is varied, from our entire ignorance of the peculiar idiosyncrasies, and subtle causes which determine the character of every case.

“Whilst some cases yield very satisfactorily to one species of treatment, others do equally well under another diametrically opposite. In the ‘Atrophia ablactatorum,’ or ‘weaning brash,’ Dr. Cheyne found the most successful mode of treatment to consist in the exhibition of calomel in small doses, morning and evening, or every night, for a week or ten days. After the third or fourth dose, a great alteration was gene-

rally perceptible in the colour of the alvine discharge, which became of a dark mahogany colour, and was generally more offensive. When this discharge took place, a favourable change in the disorder was produced. The latter remark I have not found to accord with the results of my own experience in similar cases. In many instances, calomel has certainly appeared to exert a favourable agency; but I do not consider the stools referred to as by any means critical; on the contrary, there can be little doubt but that, in any disease, and even in a state of health, such evacuations may be produced by calomel, and that considerable mischief is frequently done, by those evacuations being considered morbid, and the very exciting cause being persevered in for the purpose of removing its own effects. The occasional exhibition of clysters of thin starch and laudanum; or the use of toasted rhubarb, with any spirituous aromatic; or of small doses of opiates, combined with the warm bath; warm clothing, especially the application of a flannel bandage round the abdomen; and a properly regulated diet presently to be described—will generally be found the most efficacious mode of cure."

In the variety described by Cruveilhier, opium, warm bathing, and milk diet, properly regulated, succeeded best. The opium Mr. Cruveilhier considered as entirely antiphlogistic in its operation, exhibiting it in the dose of one grain of the extract, to two ounces of the syrup of gum arabic, which is thus prepared:

"R Gummi Arab. contus.,
Aquæ, āā ℥j.
Syrup. symplic., ℥iv.

In aquâ gummi solve, tum syrupum adjice, coque per minuta duo vel tria, spumam absume et cola.—*Conspectus des Pharmacopées de Dublin, d'Edinbourg, de Londres, et de Paris*, p. 227."

Of this solution half an ounce is diluted with three ounces of water, and two teaspoonfuls given every two hours.

"Where the stomach was affected, the opium was almost always rejected; but when the disease was more particularly seated in the intestines, it produced 'the most marvellous and constant effects.' An eighth of a grain of opium, given morning and evening, and, in some cases, every four or five hours, in a clyster of aniseed tea, jelly, or starch, sometimes speedily arrested the diarrhœa and produced inexpressible relief. Emetics and purgatives he earnestly proscribes."

In order to obviate the bad effects of a rapid transition from the use of milk to that of spoon-victuals, Dr. Dunghlison advises "that the child should be gradually accustomed to its new food; and in cases where diarrhœa has occurred, beef tea, chicken broth with rice, boiled cow's milk, with baked flour, plain animal jellies, broths freed from their oily part, equal portions of water gruel and cow's milk, light boiled eggs, are the most proper food." Arrow root, he considers, "augments the disease by its disposition to run off by the bowels;" a circumstance which is not believed in this country. Changing the nurse, when the child has not been weaned, has a good effect; and when recently weaned, the breast may be restored advantageously.

Nutritious diet is absolutely necessary; small quantities of white wine whey should be often given; and if the child refuses nourishment, it must be administered by injection, regularly, till the appetite returns.

"When diarrhœa has persisted for a great length of time, or when the system is much debilitated from any cause, the power of retaining the fæces is sometimes more or less lost. This unpleasant state does not, however, generally continue for any great length of time, but, as the child becomes older, disappears. The only treatment, if any at all be considered necessary, is to dash cold water upon the perinæum and nates daily; or, if the bowels be very loose, to administer the aqua calcis, or any other of the absorbents before mentioned."

This memoir is closed by some valuable remarks upon procidentia ani, a frequent result of diarrhœa. When it is recent, by pressing the buttocks together, it will effectually be relieved. When, however, it is strictured by the contraction of the sphincter ani, the plan of Dr. Hamilton is recommended, which is "to lay the child upon its face, to separate its thighs, and then to press together the nates. But, should these means fail, the fore finger, previously greased, must be introduced into the gut, in order to remove the stricture from the sphincter. This undoubtedly is a more safe and speedy method than the application of astringent substances to the protruded parts, which may irritate and inflame them."

Where the procidentia is kept up by diarrhœa, worms, &c. these diseases must first be cured; and the tendency to it may be obviated by mild laxatives or clysters.

"In order to prevent the continual protrusion of the bowel, when the child goes to stool, M. de Salle recommends that the edges of the anus should be supported by two fingers, until the fæces have been discharged. If the child is not suf-

ficiently old or intelligent, the nurse must do this. By way of prevention, also, all irritations of the bowels should be guarded against, and the nates be dipped twice a day in cold water. As the child grows older, the complaint generally subsides; but should it persist for a great length of time, or the portion which escapes be very considerable, astringent injections and fomentations may be had recourse to; such as a decoction of oak bark or solution of alum, singly or combined. Occasionally, owing to the protrusion having been suffered to remain down for a considerable time, and the sphincter contracting spasmodically around it, the prolapsed portion of intestine becomes swollen and inflamed: the swelling, however, is generally reduced with tolerable facility by the application first of cold lotions, composed of the liquor calcis, plumbi acetas, or zinci sulphas, and afterwards of the means before recommended. When young children have been for a long time subject to procidentia ani, it has been recommended that they should be made to sit upon a hard flat stool, or in a chair without arms, and so high that they cannot touch the ground with their feet. When they are so old, however, as to be able to walk about, the T bandage, supported by a bandage over the shoulders in the form of braces, may be applied, with or without the aid of cold lotions, as may be considered advisable.

“Should all the usual means fail in curing the procidentia, which is by no means a common occurrence, the operation recommended by M. Dupuytren will generally succeed in removing it. That distinguished surgeon, finding that the excision of piles in very old people commonly prevented the return of procidentia where the two diseases were co-existent, was induced to cut off more or less of the internal membrane of the rectum near the anus. This operation he performed in four cases by means of a hook and curved scissors; but, as violent hemorrhage occurred in one of the cases, and a copious and obstinate suppuration in another, he has, for many years, been in the habit of removing a certain number of the projecting folds of skin, which may be seen converging from around, to the margin of, the anus, by means of a pair of ligature forceps, which are flattened at one end, and scissors curved on the flat side. These folds he lays hold of at an inch and a half from the anus, and cuts them off in the direction of, and as near to, the anus as possible. In a woman, who, for ten years, had laboured under a permanent prolapsus of an oval form when she was in the erect posture, and of nearly ten inches in one diameter and seven in the

other, which prevented her from walking, and continually discharged a mucous and bloody matter, five or six of the projecting folds were removed from without inwards, without difficulty or hemorrhage. The patient, who, prior to the operation, had had more than twenty stools daily, now went six days without one; on the seventh, however, she had a copious evacuation, but the prolapsus did not recur. Ten or twelve other individuals have been cured by M. Dupuytren with equal facility. The difference between the two operations is very considerable. In the first, the mucous membrane is cut away; whilst in the second, the folds of the skin at the margin of the anus alone are removed. Should an artery be opened, M. Dupuytren recommends the application of the actual cautery. He only uses simple dressings, and in twelve or fourteen days the wound generally heals, and the patient is cured.

“Although procidentia ani, arising from relaxation of the rectum, is of but little consequence, it has been occasionally confounded with procidentia, originating in a disease of a much more formidable character. I allude to that protrusion of bowel which has sometimes been witnessed in extensive cases of intussusception. In one detailed by Mr. Langstaff, the ileum, cæcum, and colon, were found in the sigmoid flexure of the last intestine, and, during the violent efforts at stool, the contained intestine was protruded to some distance from the rectum. Examples of a similar nature have also been related by other writers.

“Those cases are to be distinguished from procidentia originating in relaxation of the mucous membrane of the rectum, by their usually greater length, as well as by the possibility of carrying the index finger very high up in the cylindrical groove, situated between the invaginated portion and the rectum: whilst in common procidentia ani, the finger is arrested by a sort of cul-de-sac, at the part where the relaxed internal membrane is detached from the muscular tunic.

“Where the procidentia is owing to intussusception, but little, it is to be feared, can be done: it is, under such circumstances, accompanied with those symptoms which are enumerated under that head, and, when present, should always induce us to give an unfavourable prognosis to the friends; by which means, as Mr. Langstaff has correctly observed, we may be exonerated from blame on the occurrence of a fatal termination.”

Vomiting and Cholera.

Vomiting results most generally from taking too much food; as nurses are in the habit of applying the child to the breast whenever it cries: this complaint is common, though, from the ease with which the child rejects it, it is generally of little moment. If this imprudence be continued, it may lay the foundation of other disorders of digestion. When the child becomes restless, does not sleep well, is hot, or the matter rejected is glairy, mixed with bile, and, if it consisted of milk, it be firmly coagulated, remedies become necessary. If the nurse be improperly chosen, if she be sick or ill, or she has undergone any violent emotion, a change must be made.

If a sour breath and evacuations, particularly if the latter be green, evincing the effect of indigestion, Dr. Dunglison recommends the use of rhubarb, or a few drops of the liquor subcarbonatis potassæ. If the stools be fætid, "and the milk firmly curdled like cheese, it may be necessary to clear the stomach by an emetic. A gentle dose of ipecacuanha is the best remedy for this purpose. By many, antimonial preparations have been recommended; but Professor Hamilton, of Edinburgh, asserts that he has frequently found them injurious to infants, from their sometimes causing a rapid sinking of the living powers. The crisis to this alarming state of prostration, according to that gentleman, is a discharge of thin mucus from the bowels. In many instances, he has seen the infant remain in a torpid, lifeless, state for twelve or fourteen hours after an ordinary dose of emetic tartar: and, as far as could be judged, nothing but the most powerful cordials and external stimulants could have prevented the fatal event. That antimonial emetics have been frequently, and indeed generally, administered without these disastrous effects being induced, he is ready to, and of course could not but, admit: the diversity of action was, however, incomprehensible to him, until he had perused Professor Orfila's work on Poisons, who has shown that, where the stomach is full, no bad effects follow; but where empty, the tartarized antimony acts as a poison. I must own, that, although I have frequently given tartarized antimony to children, I have never witnessed these unpleasant effects, nor have I met with them in the practice of others. I place every confidence, however, in the accuracy of Professor Hamilton's discrimination; and as ipecacuanha is universally mild in its opera-

tion, there is no need of having recourse to a remedy of such potent action as the other. Where any quantity of indigestible matter is contained in the stomach, it is very probable that a portion may have passed into the bowels; and it is consequently always advisable to follow up the operation of the emetic by that of a cathartic. For this purpose, aloes, rhubarb, gentle doses of calomel, castor oil, or any of the common purgatives, may be exhibited."

A little warm water, or camomile tea, answer sufficiently well, and do not distress the child by sickening the stomach excessively. A little fasting afterwards confirms the effect, as the little patients generally are perfectly well after the stomach is cleared.

When this affection depends upon the drying up of eruptions, as behind the ears, blisters to the parts from which they have receded, are advisable. If the cutaneous affection has been general, it must be managed by appropriate remedies; if the vomiting continues, an emetic will be proper, to discharge any offending matter, and then a warm plaister may be applied, or some light cordial given, as Underwood advises.

When "it appears to depend upon some irritability of the stomach, tonics and cordials are the best remedies. An infusion of the cinchona, with orange peel and ginger, or of rhubarb, or the quininæ sulphas, in regulated doses, according to the age of the child, may be administered: or the spiritus ammoniæ aromaticus, or spiritus etheris nitrici, may be given. Sometimes a little wine whey settles the stomach. Should these fail, some stimulant or anodyne should be applied externally; as a flannel dipped in spirits and slightly dusted with black or white pepper."

On Cholera, Dr. Dunghlison is very concise, and gives nothing new.

Aphthæ.

This is a very interesting chapter. Though the disease is generally trifling, yet it sometimes assumes an alarming character; particularly on the continent, where it appears epidemically.

"With respect to the worst variety of this complaint, it has been distinctly found to be accompanied by a fever of a contagious character; the eruption is preceded by a more considerable degree of drowsiness and *malaise*; whilst the feverish and other symptoms are occasionally mitigated as soon

as it makes its appearance. The stomach and bowels are generally very considerably disordered, and the evacuations of a bad character, and so acrid that the anus is excoriated. The aphthæ, in these bad cases, occasionally spread into the trachea, and induce considerable difficulty of breathing, and sometimes suffocation; but more commonly they extend down the whole length of the intestinal tube, occasioning pain when pressure is exerted on the abdomen, with every symptom usually concomitant on an inflated state of the mucous membrane of the intestines. The child vomits its food immediately after it is taken; and there is a repeated discharge of watery fluid from the bowels, accompanied with considerable griping. After a short time the aphthæ become yellow and fall off; but frequently they are repeatedly renewed, and the child sinks under the abdominal affection. The internal surface of the mouth becomes so sensible after the fall of the eschars, that the contact of nourishment occasions extreme pain, and the child cannot suck without the greatest difficulty. In these inconveniencies the nurse is not spared; the contact of the diseased mouth occasioning a most painful ulceration of the nipple.

“In the very worst species, the *aptha gangrenosa*, or *mu-guët*, there is every symptom of malignant fever present. It is said to seldom attack children above two years of age, and rarely those above nine, except by infection. Its first appearance is marked by a very spongy state of the gums, and a remarkable tenderness of the inside of the cheeks and mouth. Soon after this, little aphthous sores, having a dark coloured surface, appear upon the gums, the inside of the lips and tongue, and occasionally upon the uvula and tonsils. As the disease proceeds, the cheeks swell slightly and are very soft to the touch. Frequently the skin which covers the lower jaw is of an extraordinary redness. Besides the aphthæ which appear upon the tongue, that part is usually much furred; and the teeth about the edges of the gums are also covered with a blackish fur. The breath is extremely offensive; and at this period the disease is highly infectious, even to adults. In the progress of the complaint, the sub-maxillary glands become enlarged and slightly painful, and there is generally a more than ordinary flow of saliva.”

So similar were the symptoms of this disease to those produced in the mouth and gums by mercury, in those cases witnessed by Dr. Dunglison, that the parent could scarcely be persuaded from believing the child to be salivated. However, not a particle of mercury had been taken.

As to the danger of the disease, if the vomiting be frequent, the discharges watery, with great tenderness of the stomach and bowels; if there be great anxiety, watchfulness, and somnolency, oppressed breathing, moaning, spasms, quick pulse, salivation, hiccup, or convulsions, the prognosis, according to Dr. Dunghlison, is unfavourable; a black colour of the eruptions indicates gangrene; if they are confluent, accompanied with fever of a malignant type, or if they are continually renewed, and the base of the slough after it separates is red and moist, the danger is considerably great.

Its causes are bad food, cold and moist air, particularly when unventilated. Sucking an excoriated nipple has also been supposed to produce it.

The disease consists of inflammation, frequently of a gangrenous character, attacking the intestines.

In the mild cases, a little magnesia should be used to correct acidity; and it is the opinion of Dr. Hamilton, that the use of a solution of borax, port wine, or vinegar and water, may be had recourse to as a gargle, as soon as the eruptions have become yellow, but not till then, as till that change has taken place they are likely to reappear. With this idea Dr. Dunghlison disagrees. He considers the use of astringent lotions valuable to restrain the progress of inflammation in its first stage, and that the yellowness of the aphthous spots is a clear proof that is unnecessary, and that remedies are entirely useless.

“Should it not, however, be considered necessary to interfere, the white of an egg beaten up with three table-spoonfuls of water, or a little veal soup, or any demulcent, may be put frequently into the child’s mouth.

“In those cases where the aphthæ extend to the stomach and bowels, and are accompanied with fever and irritation, it may be well to clear the stomach by the administration of an emetic of ipecacuanha; after which, gentle laxatives, as manna, castor oil, magnesia, or rhubarb, may be given. Harris and Underwood trusted almost wholly to the use of testaceous powders, combined with the administration of gentle laxatives, repeated as occasion required. Should the aphthæ turn livid, bark and port wine may be used as gargles; while the infant must be supported by white wine posset, or by sherry wine, added to cow’s milk. The sulphate of quinine may be also administered in properly regulated doses.”

In cases of aphthæ attended with contagious fever, the tonic plan must be pursued; supporting the strength, and palliating the symptoms, being the chief indications.

"For the fulfilment of the first indication, wine may be administered as above recommended, or any other cordial; whilst from a scruple to a dram of bark, united with a few ounces of water or thin starch, may be thrown into the rectum every three hours. For answering the second indication, some of the testacea may be exhibited, and the mouth be touched with the preparations which have been recommended above.

"When the anus of the infant has become excoriated by the discharge from the bowels, it may be anointed two or three times a day with simple ointment, or a tallow candle will answer the same purpose: and should the nurse's nipples become affected, they may be washed with a solution of borax, or of any astringent."

Changing the nurse is absolutely necessary, and also the diet if it should arise from the use of improper food; mild emollient fluids, as rice-water, sugar and water, and milk mixed with one-third of whey prepared without acid, may be given; and, where it can be done, the diet should consist wholly of breast milk.

"At the hospital of Aix, the following formula for the preparation of a *crème de pain*, is highly extolled for the regimen of infants which are deprived of the breast, 'et pour prévenir le muguet.' 'Take slices of wheaten bread, dry them in an oven, steep them afterwards in water for the space of six hours, press through a linen cloth, and boil with a sufficient quantity of water for eight hours, carefully stirring from time to time with a spoon, and adding warm water as it grows thick. Towards the end of the coction, add a small portion (*une pincée*) of aniseed and of sugar, in the proportion of a dram of aniseed and an ounce of sugar to a pound of bread, and pass the whole through a hair sieve. This *crème* easily keeps for twenty-four hours, if placed in a cold situation.' "

Inflammation of the Stomach.

With regard to this disease and its treatment, Dr. Dunglison offers little that is new; inflammation of the stomach is treated in the ordinary mode by mild laxatives, blisters, and the depleting plan generally.

Inflammation of the Intestines.

When inflammation attacks the peritoneal coat of the intes-

tines, it resembles colic, though it is more constant and continued; vomiting, fever, constipation, also attend it.

"This disease either proves speedily fatal, or degenerates into a chronic state; the child remaining for a long time suffering under fever and increasing emaciation, accompanied with occasional attacks of pain in the abdomen. The bowels are usually confined; but when stools are procured, they are either slimy, mixed with blood, or, in some manner, unnatural in their appearance. These symptoms persevere, and at last the little sufferer sinks, worn out by the continued fever consequent on the existing organic lesion."

On dissection, the peritoneal, muscular, and mucous tunics are sometimes found disorganized; the intestine being frequently dark-coloured, and as rotten as blotting paper. Coagulable lymph uniting the intestines together, and thickening of their coats, are also very common.

"The treatment in the violent cases of this affection is much the same as in gastritis. In some infants, of course, depletion cannot be carried far; but the warm bath, laxative clysters, and one or more leeches, or blistering, may be employed, according as may seem meet to the practitioner.

"In older children, the complaint is occasionally induced by cold, or improper diet. In these, it must be attacked more vigorously. Blood may be drawn from the arm, or by means of leeches, according to the age and constitution of the patient, and blisters, fomentations, and saline aperient medicines be administered."

When it assumes a chronic form, connected with a scrofulous diathesis, nothing very certain in its effects can be recommended.

"The bowels, however, may be regulated, small blisters be occasionally applied, and the strength supported. The regular administration of the hydrargyrum cum cretâ may also be inculcated; and the unguentum potassæ hydriodatis, to the extent of half a hazel nut in magnitude, may be rubbed on the belly night and morning, or the tinctura iodinæ, in the dose of one or two drops, be given twice a day. The internal use of this remedy, however, requires more caution than the external; as, when given to too great an extent, it seems to irritate and inflame the mucous lining of the bowels. For supporting the strength, we have a valuable remedy in the sulphate of quinine, which may be exhibited two or three times a day, united with a small quantity of any simple syrup.

"Occasionally, in these cases, an abscess forms, which breaks, and discharges itself *per anum*. The fæces under

such circumstances are very offensive, and purulent matter is discharged. In these cases, magnesia has been found a useful laxative, and hyoscyamus, with oil of aniseed, of great benefit as an anodyne. If the appetite be not lost, although they may be very desperate cases, there is some hope of a cure being accomplished."

Intussusception.

Intussusception is commonly found in cases of death where no intestinal disorder was believed to exist from the symptoms, produced by the irregular action of the intestinal tube before dissolution.* Out of three hundred children, in the majority of them there were three or four volvuli, at the Hospital of Le Salpêtrière. No symptom of inflammation or other disease attended. Mr. Burns saw forty-seven intussusceptions in the same body. In these cases, there was no inflammation; they had no connexion with the causes of death. It is when the action of particular parts of the canal runs high, and when adhesion, and firm union of the invaginated parts, that death is produced.† Those intussusceptions which are unattended with inflammation would, if they continued, no doubt end in that state.

Sudden spasm affecting the tube, and sheathing it in the parts adjoining.

"By irritating the intestines of living frogs, Peyer observed that they contracted strongly in several parts, whilst in others they remained distended by the contents of the bowels. Into these distended portions the contracted became invaginated."

Diarrhœa and acrid purgatives also produce it. They are most commonly seated in the ileum; in the colon it is uncommon.

"It has been said that the diagnosis of this fatal disease is very obscure; and some writers of considerable authority have asserted that it can never be known till after death. From the results of my own experience, however, and still more from the cases detailed by authors, I am induced to think that we may, with tolerable certainty, pronounce respecting the presence of this disease in violent cases of the progressive kind. Of those of the retrograde variety I can say nothing from my own experience; and from all that I can learn, they can constitute but a very small proportion of the whole mass. The suddenness of the attack, the ineffectual

* Dunglison.

† Ibid.

calls to void the fæces, the excessive pain and spasms, the discharge of mucus and generally of blood during the inordinate efforts at stool, form a congeries of symptoms which may induce us to pronounce with some confidence on the nature of the disease. And even should we err, and consider the case to be intussusception where it arose from any other cause, the mistake would be less pernicious than if we should treat the case as a common bowel affection, and thus add in a manifold degree to the extent of the organic lesion. In no disease of childhood is it of greater importance to be careful in the diagnosis than in this. Any thing which would augment the peristaltic action of the intestines, so desirable in several of the diseases of early life, must inevitably, in this affection, induce a greater descent of the invaginated portion, or add to the existing inflammatory action going on at the peritoneal surface, and gluing those surfaces together."

Where the invagination is of considerable extent, and where the ileum and cæcum have passed down into the sigmoid flexure of the colon, as in those cases related by Blizzard and others, "the seat of the disease was manifested by a hard tumour on the left side of the abdomen. This circumstance, with the impossibility of throwing up more than a very small quantity of fluid, which was strongly marked in Mr. Langstaff's case, along with the other symptoms, would still more strengthen our diagnosis."

A natural termination, by the separation of the intestine, furnishes the only hope of cure. The quantity of intestine discharged is sometimes very great. Dr. Dunghlison then gives an interesting case from the Academie Royale de Medicine.

"The individual who was the subject of the case had laboured under violent dyspepsia, after which he was attacked with every symptom of internal strangulation; as complete constipation, vomiting of fæcal matter, hiccup, and severe pain of the abdomen, with an elevated tumour, very sensible to the touch, in the right iliac region. At the expiration of twelve days, after violent pain in the bowels, thirty-two inches of small intestine and a portion of mesentery were evacuated *per anum*. From this time the patient rapidly improved, a painful sensation in the right iliac region being the only inconvenience remaining."

The various modes of practice recommended to favour the separation of the intestine are then detailed. Bleeding, the warm bath, fomentations to abate the increased action, and

opiates to lessen spasm, by which inflammation is likely to be increased.

“Quicksilver has been recommended, but on what principle can scarcely be divined: if the invagination be progressive, the mercury must run through the invaginated portion; and, if retrograde, the same thing would happen; or, by getting between the intestine and the intussuscepted portion, it might aggravate the disease. The forcible injection of clysters has been recommended by Dr. Monro; and others have suggested the introduction of long bougies and of pieces of whalebone within the anus, for the purpose of pushing back the intussuscepted portion: the first of these has been found to be perfectly futile, and the latter, for reasons which will suggest themselves to the mind of every one, is completely inadmissible.”

Emetics have been recommended in progressive intussusception to invert the peristaltic motion: as vomiting is usually a concomitant, this plan is unnecessary: only prior to agglutination can it do good; then, however, the disease is not suspected. When the invagination is downwards, cathartics, according to the same theory, would seem to be indicated. Discrimination, however, between these two cases is impossible. Gastrotomy is not adviseable, as it adds another disease equally fatal to cure with the supposed one—intussusception; and thus doubles the chances of death.

With regard to the merit of the work as a whole, we would observe, that, as far as his subject extends, Dr. Dunglison has supplied the great chasm left between the works of Underwood and the present enlarged surface of improvement displayed by the lights of more modern discovery, with well-digested materials, composed of the symptoms, pathology, dissections, and treatment of these interesting diseases, and has applied with minute and discriminating accuracy those energetic principles of practice by which experience and science have so happily relieved the same diseases in adults. We think he has conferred a benefit upon the medicine of Europe and America, and will no doubt be one of our most useful citizens.

ART. XIII. *A Practical Treatise on Hæmorrhoids or Piles, Strictures, and other important Diseases of the Rectum and Anus: being, with some additions, a Treatise, to which the Jacksonian Prize was adjudged by the Royal College of Surgeons.* By GEORGE CALVERT, Member of the Royal College of Surgeons of London, and of the Medico-Chirurgical Society, &c.

THIS Essay presents, in a condensed manner, the results of European experience on a range of disease, on which the talents and the industry of some of the most eminent surgeons of this and the last century have been deeply engaged. The author, it appears, is a practical man; his essay is therefore valuable, not only from the extensive surface from which he has collected the facts and observations of others, but as he has confirmed their truth by his own experience. The high authority of the Royal College of Surgeons, London, which decided upon its merits as a prize Essay, would, of itself, be sufficient to awaken attention to its value. In our country, where, from the sparseness of the population, our hospitals are less numerous, and contain but comparatively few sick, the opportunities of investigation of some of the diseases, considered by Mr. Calvert, are comparatively rare, and render, in consequence, his observations exceedingly valuable. As the work cannot be procured by most of our subscribers, we have preferred presenting it in the form of analysis, in which the author's facts, observations, and descriptions, where it serves our purposes, are freely used. At the same time animadversions are made upon his doctrines and facts, as they may appear necessary, and the experience of others freely given, when the author has omitted to mention them.

SECT. I. *General Remarks.*

Hæmorrhoids are sometimes productive of fatal consequences. The erroneous notions which prevail on this subject, the palliative plan of treatment so frequently advised, the neglect or ignorance of the physician with regard to the various diseases of the part in which it is seated, are the causes of irremediable or terrible evils. Among these are enumerated by our author, metastasis of the disease, dangerous hæmorrhages, abdominal inflammation, ulceration of the rectum, painful spasms of the sphincters, and the formation of fissures in the extremity of the rectum.

Hæmorrhoids or piles consist in a morbid state of the vessels of the rectum and anus, attended with tumours, and a flow of blood, frequently periodical. They are called open or blind piles, according as this effusion is present or otherwise. The distinction of external or internal is unworthy of notice.

SECT. II. *The Origin and General Character of the Disease.*

The origin and general character of this disease is as follows:

“The first attack of hæmorrhoids is generally very slight, and is not preceded by any marked constitutional derangement. There is some sensation of weight or fulness about the sacrum, and extremity of the rectum, extending, perhaps, to the perineum; and the sensibility of the bladder, urethra, &c. is sympathetically increased. This state continues for a short time, perhaps for two or three days, when in many cases a slight flow of blood takes place during the expulsion of the fæces, and smears their surface of a bright red colour. This flow never occurs in some individuals, particularly during the primary attacks; but when this is the case it forms, as it were, a crisis to the complaint, and the above-mentioned symptoms disappear at an earlier period.

“After a greater or less interval the same train of symptoms are generally renewed, but in a greater degree, acquiring strength by repetition. The sensations of weight, tension, &c. are more perceptible; some sympathetic phenomena are observed; the blood is discharged in greater quantity, and tumours of varied size begin to appear within or around the anus.

“These tumours are preceded by a peculiar stinging or pricking pain, which increases as they dilate, and is generally much aggravated by the pressure of the sphincters. Sometimes blood oozes from their surface, or is squirted out through small apertures when at stool. On other occasions they remain dry, or they are moistened by a whitish serum, exhaled from the surface; but in either case, after a short time, they collapse, presenting, when they have been often distended, so many flaps of skin, forming, when external, a projecting and serrated margin to the anus.

“In weak and irritable constitutions the influence of the local affection bears upon the aspect of the patient; the face is paler than usual, the eye appears sunk, from the dark circle beneath it; the abdomen becomes tumid, the feet swell, and, in addition to these appearances, there is a sensation of

coldness with shivering, hard pulse, dryness of the mouth, &c."

The effusion of blood, or the formation of tumours, even when the attack has been frequently repeated, may not appear, though the sensations of weight, fulness, and constriction, as also the sympathetic affections, be present; the flow of blood may also occur without the tumours, though it is generally preceded by the other symptoms.

SECT. III. *On the Source and Nature of the Discharge.*

The disease consists in a preternatural determination of blood to the vessels of the rectum, in which our author supposes the minute arteries to be principally concerned: the blood, he supposes, comes not from the veins, as has been conjectured, but from the exhalants. "First, The kind of pain and pulsating sensation that precede and accompany the discharge sufficiently indicate, that there is an increased action in the capillary system of the part. Secondly, The manner in which the constitution sympathises is analogous to what takes place, when in other cases the functions of the part being preternaturally increased, it becomes, as it were, a focus of vitality, exciting or diminishing the natural tone of other organs, with which, from the laws of the economy, it is more especially associated, and giving rise to functional disorder, which is more or less intense, according to the influence that has been exerted, and the state of the general health. Thirdly, The discharge is of a florid red colour, resembling in every respect arterial blood; and if attention be paid, when, by an effort, the inner coat of the rectum is protruded, it will be found to exude from the surface, producing an appearance similar to that which occurs when too much force is employed in filling the vessels of the same part with minute injection. Fourthly, The discharge is generally followed by an abatement of pain, heat, &c., which are the usual attendants of preternatural excitement in a part. It is also frequently preceded and followed by an exhalation of a serous nature, which proceeds from the same source, since the change of colour is gradual from white to florid red, and *vice versa*.

"In many cases the blood flows for a short time, and the discharge is not renewed until the next attack, but on other occasions it is only observed when the fæces are expelled, or the parts are thrown into false action from irritation, as in tenesmus. The fæces are found smeared with blood, but it is

only superficial; there is no intermixture of this fluid with the fæculent matter."

These remarks are applicable to its more simple forms: sometimes the disease is more complicated and irregular, "in which the discharge, in consequence of irritation from tumours, chronic inflammation of the mucous membrane, or other causes, is either too long continued, or too abundant, or the tumours become highly inflamed, slough, and ulcerate. Hæmorrhoids then become, in the strictest sense of the word, a disease, as painful and inconvenient as destructive to the general health, affecting, in a particular manner, the functions of the stomach, and the whole of the digestive organs."

In the discharge there is nothing peculiar, it is almost invariably, as already stated, of a brilliant red, "except in rare cases, where the veins of the part being dilated, are accidentally ruptured during the paroxysm, when it is dark, and often mixed up with the fæces."

The quantity of blood occasionally discharged, without endangering life, is enormous; it is frequently exaggerated by the patients, and its quantity is mistaken from the mixture of other fluids with it.

"The general symptoms in such cases are of an inflammatory nature, and the vessels from which the discharge proceeds must be considered in a state of preternatural excitement; but if the discharge does not cease when the symptoms that preceded it have disappeared, or is not checked by proper remedies, it is necessarily followed by great prostration of strength, with relaxation of the exhalent vessels, and it then becomes a disease of debility, and the cause of its further continuance. Patients, in such cases, often become cachectic, and die eventually from general dropsy."

SECT. IV. *On its Periodical Return.*

The discharge is periodical, and alternates with menstruation: in a lady menstruation was stopped by astringent lotions; it did not return, but appeared in a regular discharge of blood from the anus.

"In almost all cases, therefore, where hæmorrhoidal diseases have been produced by constitutional causes, especially where they have existed for a considerable length of time, their influence is not unfrequently beneficial, and to check them suddenly, or even sometimes with more caution, might be productive of dangerous, or even fatal consequences; but when they are the result of causes chiefly or entirely local;

without much predisposition in the constitution, no such danger need be apprehended; and to encourage and submit to an affection, which at all times is both inconvenient and troublesome, and in its aggravated form replete with dangerous consequences, is a sorry equivalent for the bare possibility of escaping some imaginary disease."

SECT. V. *On Hemorrhoidal Tumours.*

These tumours are of two kinds, differing materially in appearance and structure: the first, called piles, are "first seen in the form of small fleshy tubercles, generally of a brownish or pale red colour, and situate within the anus, or descending from the rectum. On examining them with the finger, they are found to have a somewhat solid and spongy feel, and, when cut into, present a surface more or less compact, and bloody, from which blood oozes, leaving the texture pale, and more relaxed.

"When these tumours are more external they are paler, and generally, also, more elastic and transparent; appearances which arise from the nature of the skin that covers them, and the serum with which their internal tissue is often infiltrated. These are sooner produced, and disappear more rapidly than the former.

"These tumours very often contain a central cavity, filled with fluid, or coagulated blood, which is of a brighter or darker red, according to the length of time it has been effused. The lining of the cyst is either smooth or granulated; and by the assistance of the microscope in the dead subject, after having forced into the arteries by which they are supplied with blood some fine and coloured injection, a few minute vessels may be traced, through which the fluid gradually exudes into the above-mentioned cavity, but there is evidently no connection whatever with any of the larger vessels.

"This cavity is usually small, not exceeding the size of a pea, but it is sometimes large enough to contain several drams of blood.

"More generally, however, there is no regular cyst, but the substance of the tumour is infiltrated with blood, which eventually becomes dark and coagulated. This blood does not appear to be the result of common extravasation, since it is not generally diffused, as in ecchymosis, but confined in separate patches of different shades, presenting a variegated aspect when the tumor is cut into: on closer examination it appears as if it were contained in dilated vessels, which tra-

verse the tissue in the direction of the long axis of the rectum, so that, if the tumid part be divided longitudinally, they present numerous dark streaks through the substance, but, if the section be made transversely, small, roundish specks only appear.

“The manner in which the common hæmorrhoidal tumour forms is in general pretty uniform. The patient is first made sensible of its developement by a peculiar pricking, stinging sensation, generally within or around the margin of the anus; and, on applying the finger to the part, it is felt slightly elevated, as if some newly-formed substance were forcing its way to the surface.

“The increase of these tumours, when once they have become in some degree permanent, does not take place in every direction; they elongate rather than expand, the body being usually of a conical form, and larger than the neck, which arises probably from their relative position with the surrounding parts. Sometimes more or less blood is exhaled from their surface: on other occasions a serous fluid only is exhaled, or they remain nearly dry; but in either case they generally disappear in a short time, and return again at an uncertain or regular period, increasing in size, and becoming firmer in texture with each repetition.

“The discharge of blood takes place in two ways. First, It is exhaled from the surface, as in other cases, when it proceeds from the mucous coat of the rectum. Secondly, When either a false or natural effort is made, and the tumours are forced down, and grasped by the sphincters, a small quantity of pure florid blood is forced out in a fine stream from one or more points; and, on examining attentively the part from which it issues, several small orifices may be discovered on the body of the tumour, which is now considerably softer than before.

“After some portion of blood is evacuated, or the local determination of fluids to the parts has ceased, the tumours collapse, leaving as many pendulous flaps, formed of the distended cutis. If the tumours have been small, or of recent formation, these flaps are either scarcely observable, or they disappear in a short time; but, under opposite circumstances, they are more conspicuous, remain stationary, and, where the tumours were external, form a projecting and indented margin to the anus.

“When, however, they have been strangulated for some time by the pressure of the sphincters; when they have been repeatedly gorged with fluids, or their usual mode of disper-

sion is prevented by other causes, either local or constitutional, these tumours, acquiring more solidity, become permanent, varying but little in size at different times, and forming a source of almost constant pain and inconvenience, in being protruded, inflamed, ulcerated, or, what is very common, by inducing a troublesome and distressing prolapsus of the anus.

“ This permanent state of the tumours is owing partly to the developement of the capillary vessels, gradually obliterating the interstices ; and, in part, to the effused blood coagulating, and becoming organized ; and hence the production of the condylomatous tumours, and the foundation of that irregular mass, which is found around the anus in those who have been long subject to hæmorrhoids, commonly termed the hæmorrhoidal excrescence, all of which are permanently solid, and can only be removed by the knife or the ligature.

“ Occasionally these tumours attain an enormous size, arising chiefly from a large quantity of blood being effused into the central cavity, and in some degree also to the great increase in the thickness of the cuticular envelopment. Schmucker states, that he was called to a gentleman, who had some hæmorrhoidal tumours, of which one was as large as the fist : he extirpated them with the knife, and his patient speedily recovered. Serum is also sometimes effused in considerable quantity through the tissue of the tumours ; but I am not aware that it is ever collected together, as in the other case, and indeed, whenever the increase is both rapid and great, we may conclude, that the bulk of the tumour is owing to an accumulation of fluid or coagulated blood in the centre.”

By Chaussier and De Larroque, they are divided into two species, the cellular or spongy, and the encysted. The cellular consists of a homogeneous, reddish, spongy parenchyma, becoming white when macerated. If varices attend the hæmorrhoids, these diseased veins are always placed without the tumours, which are formed of the minute ramifications of their extremities. On examining the structure of these tumours after death, owing to the absence of vascular action, they are found collapsed. In other cases, where the tumours have been of long standing, a new substance is formed, “ the interstices are filled up from repeated accessions of inflammation, by which the parietes of the minute vessels are strengthened and elongated, and new matter deposited. Under these circumstances, the volume of the tumours, not being very materially increased by the accession of circulating

fluids, continues nearly stationary after the phenomena of vitality have ceased."

SECT. VI.—*Hæmorrhoidal Varices*.

These tumours differ materially from those just described; they appear slowly and gradually, and their enlargement is not periodical. They are of a dark bluish colour, soft and elastic, resembling a ripe grape, and on compression become sensibly less, returning to their former dimensions on removal of the pressure. Their form differs from that of the true piles. They are broader at the base, rounder, and sometimes distributed in irregular clusters, as in the vavex of the saphena; they increase gradually, or remain stationary through life, and are not subject to hæmorrhage. They sometimes are greatly enlarged, and extend up the rectum as high as the colon, forming a chain of tumours on the inside of the intestine, and demonstrating the necessity "of ascertaining the true nature of all tumours about the rectum or anus, previous to employing the knife for their removal, since the hæmorrhage must necessarily be always dangerous, or may even be fatal. Fatal cases have also been recorded from a rupture of the parietes of these vessels; and the degree of hæmorrhage may be computed when we consider, that, according to some authors, these swellings have been found nearly as large as the fist."

In a case related by Petit, after extirpating the tumours, death took place in a few hours, and the rectum was found full of dark blood.

The varices of the rectum may, by attending to the above circumstances, be easily distinguished. They, however, sometimes exist at the same time, and in the same subject, with the true pile. "The inspection of dead bodies proves that this is the case; that the hæmorrhoidal veins being rendered varicose, their extremities are either afterwards imbedded in that kind of spongy substance, which has been stated to form the bulk of the common hæmorrhoidal tumours of long standing; or that the cellular tumour being formed, the veins become dilated in consequence."

SECT. VII. *Inflammation, &c. of the Hæmorrhoidal Tumours*.

In proportion as the hæmorrhoidal paroxysm frequently recurs, the tumours generally increase in size, "and such as

were originally within the extremity of the gut are often forced down, and appear at the anus. Sometimes they continue in this position, contracting adhesions which impede their reduction, or acquire such an enormous size, that if returned they act as foreign bodies to the rectum, and are immediately protruded; but more frequently they are only seen externally when the patient is at stool, or is desired to make an artificial effort.

“By the pressure of the sphincters, partly also by the mechanical injury in the passing of indurated fæces, and a disposition in the tumours to vascular action, inflammation is often produced, attended, in many instances, with the most violent and excruciating pains, and not unfrequently with suppuration, or even sloughing of their substance.

“The pain is generally of the acute throbbing kind, accompanied at intervals by a sensation, as if the parts were punctured by some sharp instrument, extending deep into the rectum. These symptoms are much aggravated during the expulsion of the fæces, when the sufferings of the patient often beggar description. There is also more or less of sympathetic fever; and if the inflammation extends far up along the mucous surface of the intestine, the bowels are moved with difficulty, and the tongue has generally a deep red appearance, with the papillæ somewhat more elevated than usual.

“The extreme violence of the symptoms, however, in such cases, cannot be better illustrated than by mentioning the outlines of a case, in which high inflammation of some hæmorrhoidal tumours was succeeded by sloughing and suppuration.

“Mrs. —, aged twenty-two, after having for some time great inconvenience from the presence of some hæmorrhoidal tumours within the rectum, was attacked at the usual period of their enlargement with acute throbbing pain in the rectum, quick bounding pulse, retention of urine, and other symptoms of local and general irritation. A physician being called in, leeches to the anus, purgatives, &c., were prescribed, but the symptoms still continued to increase. At this time I saw her; her countenance was suffused, and distorted from pain, and, although a woman of strong mind and great fortitude in general, she could not, in the present instance, avoid expressing her sufferings by loud and continued shrieks, particularly when the bowels were moved. The slightest motion of the body was productive of the most exquisite torture; and such was the sensibility of the inflamed parts, that an attempt to arrange the bed-clothes, or a light tread over the floor, added considerably to her sufferings.

“From the account of the nurse it appeared, that two dark-looking tumours had appeared at the anus, but at this time they were not visible; and the extreme sensibility of the parts rendered it quite impossible to make any satisfactory examination. A large quantity of blood was taken from the arm, and at the end of two days the violence of the pain had so far abated as to allow me to ascertain the state of the rectum. On carefully introducing my finger, I could distinctly feel some loose soft bodies, partly detached from the mucous surface, and a few days after these were expelled without the slightest hæmorrhage. Three of these bodies, both in form and colour, very much resembled the common leech when partly distended, and appeared to consist of coagulated blood, inclosed by a dark membrane, which was too much disorganized to admit of any opinion being formed respecting its nature; another was of a rounder form, and appeared to have contained pus.

“When the life of the tumour is not destroyed by the violence of the inflammation, the surface often ulcerates, or suppuration takes place, and matter is lodged in its substance. In the former case there is always considerable pain, particularly when the bowels are emptied, a troublesome tenesmus, with a discharge of a sanious dirty pus, or an ichorous matter from the anus: in the latter case, the tenderness does not wholly abate until the contained matter has penetrated the surface of the tumour, when the aperture generally heals rapidly. It sometimes happens also, that the thickened envelopment of the tumour opposes so much resistance, that the contained pus is forced backwards, insinuates itself through the cellular membrane, and points near the anus. This may show the necessity of opening any of these tumours, which are supposed to contain pus, for the internal wound soon heals when the process of suppuration is confined to the tumour, whereas in the latter case the operation for fistula in ano is generally required.”

The varicose swellings of this part yield too easily to suffer from pressure of the sphincters, and therefore the above remarks apply almost entirely to the common hæmorrhoidal tumours. These swellings also resist less the passage of the excrement, and are not disposed to spontaneous inflammation.

SECT. VIII. *On the Causes of Hæmorrhoids.*

Age, sex, climate, hereditary disposition, and the position and structure of the hæmorrhoidal veins, which are without valves, are its predisposing causes.

Costiveness, fasting, sedentary habits, violent passions, worms in the rectum, drastic medicines, excess in venery, pregnancy, are its exciting causes. Aloes, colocynth, rhubarb, produce, when given in large doses, a straining action of the rectum, and a great determination of blood to the hæmorrhoidal vessels, and thus give rise to the formation of tumours. The sphincter muscle grasps the internal folds of the rectum and the hæmorrhoids, and thus increases the disease. The above purgatives are therefore dangerous, and in the order above designated. Suppositories, stimulating clysters, are, for this reason, to be avoided.

Costiveness, Mr. Calvert supposes, is by no means so frequent a cause of this affection, though it certainly in some measure contributes: he is disposed to consider it as much constitutional as phlegmon, or any other inflammatory affection.

“A costive state of the bowels is natural to some persons, and any attempt to counteract it is productive of debility. Sometimes it arises from the diet not being sufficiently stimulating, and hence a torpid state of the bowels, with hæmorrhoids, often occur, when those who, having been accustomed to good fare, are put upon a low diet, or when water is substituted for wine, or any other stimulating beverage.

“A low diet, however, may produce the same effect in another way, if the quantity as well as the quality of the food be materially diminished. It necessarily lessens that distention of the alimentary tube, which appears to be required for a vigorous peristaltic action, and, by reducing the cavity of the abdomen, takes, in some degree, from the pressure of its parietes. In Italy, and other catholic countries, where, from motives of penance, many individuals, at certain periods, or sometimes for a continuance, submit to a very poor and scanty diet, this fact is often exemplified. I have known one instance in which, from a similar cause, the bowels were not moved more than once in seven or eight days, and this state had continued for some time. Morgagni illustrates this fact by referring to the life of Sarpi, who, when a young man, having taken little food, and drank nothing for several days, was affected with obstinate costiveness, which produced piles, and a troublesome prolapsus of the anus.”

SECT. IX. *General Treatment of Hemorrhoids.*

Mr. Calvert, notwithstanding the high authority of Dr. Cullen, is disposed to consider hæmorrhoids as generally de-

pendent on constitutional affections ; and that even when they are local, they soon engage the system, and become dangerous.

“ A gentleman, in whom the discharge and swelling of the tumours were in some degree periodical, being under the necessity of going to some distance from town, endeavoured to check the attack at its commencement by applying cloths, dipped in cold water, to the anus. The local excitement was, in consequence, subdued, but was succeeded by violent pains in the stomach, vomiting, and general fever.

“ Mr. Howship states, that a gentleman, who had a periodical discharge of blood from some hæmorrhoidal swellings, was induced by the advice of a quack, contrary to the opinion of his surgeon, to apply a strong vitriolic wash. This also cured the discharge ; but he died within three days, from an attack of some gouty affection of the stomach. Apoplexy has also been found to succeed similar acts of imprudence ; and sometimes different cutaneous eruptions will alternate with the afflux of blood to the rectum.”

As the danger of a sudden cure is increased by the frequency of attack, it is first necessary to lessen the determination of blood to the part, and remove the exciting causes. This must be regulated by the circumstances of the case. If it has succeeded to a more important disease, in a more vital part, it may be considered as critical. The exemption of those who are subject to hæmorrhoids from other diseases, is a sufficient proof of the propriety of this axiom. He advises a proper mixture of vegetable and animal food which is nourishing, laxative, and not too stimulating. The frequent use of active purgatives is pernicious, as they produce irritation, heat, and excitement at the extremity of the rectum.

Hot liquids, as tea and coffee, from the effect they have on the alimentary canal, by debilitating the function of digestion, Mr. Calvert reprobates ; we should in those cases think that, where indigestion was the result, they might be dangerous ; in ordinary constitutions, we cannot conceive that they can do any harm. Hot and stimulating injections, also, he considers as pernicious : on the contrary, those of cold water, from the sudden good effect they produce, cannot be too highly recommended ; these injections are valuable, not only in those cases where there is inflammation, but also in the chronic state of the disease, attended with tumours, which are nearly stationary.

In cases where the internal coat of the rectum is much relaxed, and attended with a considerable discharge of serous

fluid, astringent injections, composed of infusions of green tea, decoctions of oak bark, solutions of the sulphate of zinc, and sulphuric acid in water, are recommended.

As to the proper laxatives, the supertartrate of potash, in combination with sulphur, in the dose of a tea-spoonful twice a day, are advisable. Ward's paste, cubebs, and other stimulating remedies, are only suited to those cases where there is great torpor of the tumours and the system generally.

Sometimes the hæmorrhoidal discharge is entirely local, though at first it may have originated from the metastasis of another disease; its removal then is attended with no bad effects.

“In cases, however, in which the suppression of the attack is followed by violent pains in the abdomen, by hæmorrhage from the lungs or stomach, or, in fact, by any affection that appears to be associated with it, it is generally advisable, not only to employ such means as the urgency of the case may require, but, if possible, to produce a revulsion to the vessels of the rectum. Warm stimulating fluids should be injected into the rectum, and the patient should sit over the steam of hot water. If these means fail, leeches should then be applied around the anus, or recourse may be had to electricity for the same purpose. The latter method is strongly recommended by Desault, who states that he has derived great advantage from it, both for himself and others.”

SECT. X. *On the Local Treatment of Hæmorrhoidal Tumours.*

1. Application of medicines. 2. Compression. 3. The knife or ligature—embrace its various modes of treatment.

Ointments, Mr. Calvert considers as operating by the exclusion of the air, and increasing the exhalation from the surface: their active ingredients, he believes, have no effect. Pressure, by a compress of linen of a conical form, wet with strong solutions of the sulphate of zinc, or decoctions of oak bark, with sulphuric acid, applied cold, and continually renewed as they become warm, he considers as valuable. The pressure on the compress may be made by a bandage or by the fingers. As there is a sense of prickling and fulness felt frequently previously on the spot where a tumour is about to form, pressure of that part, between the fingers, frequently prevents its formation, and thus renders the attack milder. We thus prevent the tumours from becoming permanently larger, and also remove the irritation occasioned by the afflux of blood from the surrounding parts.

When the tumours are more internal, the rectum bougie or a common candle should be introduced within the anus, and the swellings thus moderately compressed.

With regard to the great variety of nostrums recommended for this disease, the cold water in which they are generally dissolved appears to be the active ingredient.

The inflammation of piles is often spontaneous; though sometimes it is produced by the compression of the sphincter ani, when these tumours are protruded within its grasp. The tumours are then to be replaced by passing the finger, well oiled, gently within the anus, thus forcing them within it.—A horizontal position, and castor oil to move the bowels gently, would then be proper. If the inflammation runs high, local and general bleeding, and, as soon as it is possible, cold injections should be given. Sometimes, from the pain and irritation, the piles cannot be returned; and from the continual pressure of the sphincter they swell excessively, and mortification takes place. They must first be emptied of their fluids by scarifications with the lancet; leeches give great pain when the parts are highly inflamed, and therefore cannot be used with great effect. If local bleeding be necessary, it may be drawn from the loins by cupping; cold washes applied externally will often be sufficient. Sometimes a small tumour in the centre of the others causes the pain; then puncturing it with the lancet generally gives relief.—Often the tumours unite at their sides, obliterating a part of the cavity of the rectum to the extent of two or three inches; warm emollient glysters carefully injected with pressure by a short rectum bougie, introduced twice a day, and suffered to remain for some time, and then withdrawn by a tape attached to one extremity, have, in that case, completely cured the disease. M. Dupuytrin in these cases applies the actual cautery.—“A hollow instrument, perforated at the sides, is introduced within the rectum, and so contrived, that, on separating the handles, a portion of the tumid surface is forced through the perforations. A cylindrical piece of iron, red hot, is then rapidly introduced, and immediately withdrawn, with a view to produce sloughing and suppuration.

“I have already noticed, that after hæmorrhoidal tumours have existed for a long time, they become more or less permanently solid, elongate, and often descend below the external sphincter. This descent usually takes place when at stool, and the strangulation of their substance is often attended with great suffering. Various methods have been employed, particularly by the French and German surgeons, to prevent the

descent of the tumours. Bodies of various forms, composed of elastic gum, &c., have been introduced within the anus, and retained there by a compress and bandage; but these, as well as all such means, have been found very inconvenient and painful, and answer but imperfectly the purpose for which they are employed. They are very apt to become displaced, or the internal sphincter, habituated to the pressure, relaxes, so that a portion of the swelling is forced down, and compressed between that muscle and the side of the instrument. The only plan I believe to be of service in cases of this nature is to compress the anus upwards, in the manner recommended by Professor Chaussier. This is done by placing together layers of wet lint, until the surface of the compress is nearly on a level with the nates, its apex directed to the anus. An astringent solution may be used at the same time, by moistening the lint with it instead of water."

When, however, the piles are large, painful, ulcerated, and bleed frequently, and interfere, by their protrusion, with the occupations of life, the knife or ligature is the only remedy.

The ligature applied in the common mode is sometimes dangerous. Petit has related a case in which it proved fatal. Its application sometimes produces symptoms similar to those occasioned by strangulated hernia, pain and tenderness of the abdomen, nausea and vomiting, sometimes combined with retention and suppression of urine, convulsions, and even tetanus. The tenderness is often so great also, as to render the touch of the bed-clothes painful.

Le Dran, Abernethy, and Copeland, think the ligature often dangerous.

"In one instance the patient very narrowly escaped death; in another, very serious symptoms were produced, and in a third the operation nearly proved fatal. I have also heard of one or two instances where the life of the patient was destroyed by freely tying off the hæmorrhoidal excrescence."

It does not always succeed in removing the tumour, and frequently lays the foundation of fistula in ano, by producing ulceration. To the use of the knife, hæmorrhage is the principal objection. The recorded cases of fatal termination by the knife, are three in number, according to Mr. Calvert; and in these he supposes the tumours were varices, and should not have been opened under any circumstances; he, accordingly, prefers the knife therefore in all cases of real piles: and in support of this practice, he brings some interesting facts. The first from Wiseman:

“The tumours are described as very large and numerous, and, although considered as excrescences, were, I have little doubt, of the same nature as common piles. Describing the operation for their removal he says, ‘I began with those nearest the verge of the anus, clipping them off close from their roots, one after another, as fast as I could, not minding the bleeding, till I had freed my way to those within the anus. Then with a sponge, dipped in oxycrate, I washed off the blood, and with some small actual cauteries dried the roots of them. That done, I oiled my finger, and passed it into the anus, to make way to the next; and whilst I held my finger beyond it, close to the root, my servant the mean time pulling the ficus towards him, I passed the scissors under it towards the end of my finger; then tied them, and passing on, cut them off, my finger within directing me in the work. I tried the speculum ani, and by the help of my finger within, and a speculum at the entrance of the verge, I cleared the anus of them, and cauterized their roots. Then I fell to work with the rest, snipping or cutting them off,’ &c. &c.

“Schmucker describes an operation, which shows how safely the common hæmorrhoidal tumours, even when of an enormous size, may be extirpated by the knife. ‘About a year ago, I was called to one of my own countrymen of distinction, who had three large tumours, one of which was equal in size to the fist. The bowels had not been moved for more than three days, during which time he had not slept, and had suffered the greatest torment. I ordered him to lie down upon the table, the assistant to hold apart the nates, and the patient to force down, as if at stool, so as to spread out the tumours. I then opened the largest, and found the skin half an inch in thickness, and the cavity itself was so large, that I could bury the whole of my finger within.—A quantity of thick dark blood flowed out, and when, in consequence, the flaps were drawn together, I cut them off with the curved scissors, and removed the other two in a similar manner. Two tumours now appeared from within the rectum: these, of which the largest was about the size of a walnut, I also removed with the scissors. The whole of the blood lost amounted to eight ounces. I applied compresses, dipped in cold water, ordered a dose of Glauber’s salts, and, as the operation took place towards evening, and the patient had not slept for three nights, I had him put to bed. The following morning he informed me with great delight, that he had not only slept well, but that his bowels had also been

moved. The rectum was injected with cold water ; litharge ointment spread upon a small piece of lint was applied to the open wound, and in a few days it was entirely healed.' "

Mr. Abernethy advocates decidedly the same practice, which he has followed for twenty years, without inconvenience or risque, and with an immediate relief of suffering.

As, however, the extirpation of the piles by the knife is sometimes attended with fatal hæmorrhage, we should be disposed to regard the ligature as entirely preferable, particularly as the operation, lately recommended by Dr. Physick, of the substitution for the ligature of the canula and wire, as used in the extirpation of the tonsils, is attended with little pain or danger. In applying the ligature, however, it must be recollected, that it must not be applied to the piles when they occur on the verge of the anus, as the fine skin which surrounds them at that part is extremely sensible. In those covered by the mucous coat of the rectum, there is often little pain, comparatively, from the effect of the ligature. It must be remarked also, that Mr. Calvert, in advocating the knife, appears to have exaggerated the difficulties attending the use of the ligature, for it appears, that in one of the cases quoted from Petit, in which death took place, five piles were tied. It was the number of the ligatures, no doubt, which produced these serious effects. It is therefore safest, when this operation is concluded upon, to put the wire round only one at a time, and to wait for recovery before any thing further be attempted : and it will generally be found that the removal of two or three tumours will be sufficient to eradicate the disease.

When the ligature does produce pain, considerable fever, with delirium, the ordinary depleting remedies, general and local bleeding, with fomentations, will generally alleviate the distress ; and after it has separated, we would recommend the application of cold water, or some cooling lotion, to restore the tone and promote the healing of the part from which the tumour has been removed. If fulness of the head, or any other symptom of plethora or disease appear, after the system has completely recovered, as it often does in old cases, V. S. and low diet should be immediately resorted to, and it will generally relieve it. In those cases attended with large and frequent evacuations of blood, this danger is to be apprehended, and promptly met. If a disease such as dyspepsia supravene, which is lasting, the application of an issue would be advisable.

SECT. XI. *Operations.*

The particular operation necessary, must depend upon the position, size, and form of the tumours. When the piles are single, or stand alone, their extirpation may be attempted at once. When they are more extensively involved with the surrounding parts, or form irregular masses, more caution is required. The bowels must, in the first place, be freely opened, and, as soon as the medicines have ceased to operate, but not till then, the extirpation may be entered upon.

“ Having placed the patient upon his knees and elbows, and previously cleared the rectum by injecting into it some warm water, let him strain, so as to force the tumours downwards, whilst an assistant holds aside the nates. When, by these means, the tumours are more exposed, the surgeon is to grasp that which he intends to remove first between his finger and thumb, and draw it gently forwards, or a hook, if requisite, may be employed for that purpose; and having exposed the whole of the tumour, it is then to be separated close to its base, with the probe-pointed bistoury, or the common scalpel. If there are more, they may be removed in the same way, but this is not always necessary, as the smaller ones often disappear altogether when the others have been extirpated.

“ If the tumours form an irregular and projecting mass around the anus, it is better to include the whole in two ligatures, tied at opposite points. The ends of the two ligatures should then be gently pulled, so as to draw the whole mass a little forwards, and the whole included by the ligatures separated with the bistoury or scalpel. The position of the patient will withdraw the surrounding skin, and in the latter case effectually prevent too much of it from being removed with the tumour.

“ Sometimes also it is necessary to employ the scissors, but they should not, I think, be used unless when the tumours are very small, or it is inconvenient to use the knife, because, from the contusion which they undergo in this case, the wound is necessarily more disposed to suppurate. When the same operation is to be performed upon a tumour completely within the rectum, the wooden gorget, or director to guide the incision, and prevent the sides of the gut from being wounded. The improved speculum ani will, in this case, be found useful to ascertain the situation of the tumour, and enable the operator to place the director in the proper

position. When this is done, the common bistoury must be introduced along the inside of the fore finger, carried over the neck of the tumour, and the division effected by drawing it forwards firmly along the director.

“In applying the ligature, the patient must be placed in the same position as in the former case, and, if possible, the whole of the tumour that is to be removed exposed in the manner already mentioned. If the tumour is large, or very broad at the base, a double ligature should be passed through it near to its basis, by means of a curved needle; but under other circumstances a single ligature will answer every purpose. In either case, however, great care should be taken that the ligature is applied with sufficient force to prevent any partial communication between the parts it is intended to separate; and, as the degree of irritation must be, in some degree, proportionate to the quantum of substance compressed by the ligature, it is not advisable to operate upon several at the same time.”

For some days the diet should be scanty and antiphlogistic; V. S. both local and general, should be practised if inflammation ensue, with cold applications to the anus; “but, in the contrary case, particularly if there is an anxious expression of countenance, with restlessness, convulsive twitchings, and other prominent symptoms of excessive nervous irritation, the ligatures should be divided, and the tumours removed with the knife. In one instance, I have seen the effects of the ligature prove fatal even after this plan of dividing them was effected.”

A middle plan of operation has been suggested, which is intended to combine the advantages of both the ligature and the knife. In early times the ligature was applied, and then the tumour afterwards cut off, removing the ligature at the same time. This operation has been variously modified by modern surgeons.

Sir Everard Home “recommends that the tumour be taken up with a double ligature, and the intermediate portion be afterwards divided. In this mode of operating, he states, that the subsequent symptoms are much less violent; but it is very evident that it is founded upon a wrong principle, for if the ligature be tied sufficiently tight, all communication with the substance of the tumour is necessarily cut off, and no advantage whatever can therefore be gained.

“An operation nearly similar is recommended by Mr. Charles Bell, namely, to tie the tumour at its base, and cut off the convexity with the scissors. The following descrip-

tion of the operation is given by this gentleman :—‘ The patient resting on his knees, the surgeon holds aside the nates. The surgeon, taking hold of the tumour betwixt his finger and thumb, draws it down, so as to expose the base of it.— Now let him pass the hare-lip pin across the base of the tumour, take off the steel point from the silver pin, over the pin, and consequently fully over the tumour: he is now to draw his ligature; he is to draw as much as the patient can bear, without excessive pain: with one motion of the long curved scissors he is to remove the tumour which is thus included in the ligature.

“ ‘ The object of the first part of this operation is to restrain the bleeding, and to keep the membranes in contact, that they may adhere, and be consolidated. The advantage of the method is the ease with which it is done, and that the pin may be withdrawn on the first rising of the pain and tension. In the succeeding morning, or in the evening of the same day in which the operation is performed, the pin may be withdrawn if there come pain and tension on the part, for its purpose is answered. But this will not in general be necessary; the pin and the ligature may be permitted to remain until the parts go through the whole process of inflammation. The effect of this operation with the knife or scissors, thus performed, is the adhesion and consolidation of the loose membrane, and the obliteration of the vein which bleeds.’ ”

Of the plans by ligature, which are all painful, the use of the canula and wire, as in the schirrous tonsils, appears to be most advisable: the canula should be short. This mode gives little pain. Sometimes, after the operation, a contracted state of the anus remains; a bougie of elastic gum daily introduced, and left off gradually as soon as the wound is healed, cures the disease.

CHAP. II. ON STRICTURES OF THE RECTUM.

SECT. I. *General Remarks.*

This affection frequently presents only a mechanical obstruction, without any cancerous tendency, and it is only from neglect that it becomes at all dangerous. It often exists for many years without any bad consequences. Mr. Calvert states that the disease occurs more frequently in the male than in the female sex. Desault, however, is of a contrary opinion. As it frequently exists, without immediate application for relief, it often becomes serious before the medical

attendant is called. It has been mistaken for intussusception, a circumstance which shows the absolute necessity of an immediate examination. Scirrhus of the uterus has also been confounded with it, even by eminent surgeons.

SECT. II. *On the different forms of Stricture, &c.*

Strictures in this part vary considerably. Sometimes the inner membrane projects into the intestine, forming a septum, which nearly fills it. It yields readily to pressure on, introducing the finger; and, as it is owing to a spasmodic action of the fibres of the intestines, is never found upon dissection. This spasmodic state sometimes occurs to a considerable extent. Mr. Calvert relates the case of a female, who "died from some unknown cause of obstruction. The extremity of the colon was enormously distended, and below, at its sigmoid flexure, the cavity of the gut was nearly obliterated to an inch and a half in extent. It appeared to have been but recently formed, for the villous membrane, excepting that it was corrugated, had quite the natural feel and appearance, and even the muscular coat was not materially changed, as is usually found in other cases of stricture.

"Hoffman states, that an elderly man, who had imprudently suppressed the hæmorrhoidal discharge, was seized with violent pains in the bowels, and such a contracted state of the rectum, that it was not possible to force up any thing in the shape of a clyster. On examining the body after death, the whole of the rectum, and some portion of the colon, were found contracted to the size of the finger. A few analogous cases, which likewise proved fatal, have been related by other writers; in these the patients were almost suddenly affected with violent pains in the abdomen, and the contraction appeared to have been formed but a short time previous to death."

Frequently, the contraction resides in the mucous membrane alone, and is produced by its induration and thickening, by the inflammation and the deposition of coagulable lymph. The muscular coat contracts gradually upon the arrested fæces, and the whole structure of the gut becomes gradually involved in the disease. It is caused sometimes by inflammation taking place in the gut, and is increased by the frequent efforts to discharge the fæces. The sphincter does not relax, nor does the bowel itself contract. The abdominal muscles, the only power by which the fæces are expelled, urges down a fold of the rectum, just above the sphincter; the sides of this fold

adhere together, lose their softness, and become a permanent septum, standing nearly across the intestine. On examination, by the finger, when this state of things takes place, the internal membrane is found to be protruded into the cavity of the intestine, in irregular folds, which appear soft and pulpy to the finger, as if distended by a fluid. They are occasionally covered with coagulable lymph, and united together by organized bands of the same substance.

“In some cases, however, the form of the internal membrane is not materially changed by the effect of inflammation, but it is more or less covered with a false membrane, or is ulcerated in different parts. In the former case, the inner surface of the gut has a roughish, uneven, or granulated feel, very unlike that velvety smoothness which it possesses in its natural state.”

This form of the disease is confined almost solely to the lower part of the intestine.

As these forms of the disease proceed almost entirely from inflammation, excited by the presence of irritating matters in its cavity, Dr. Calvert might have mentioned that tenesmus is a common symptom. The permanent thickening of the intestine, and adhesions within it, in robust constitutions particularly, are liable to occur. In the weak and irritable, the consequences are ulceration of the mucous membrane, secretion of pus, constant uneasiness, irritation, and a great secretion of purulent matter. The operation for fistula,* for hæmorrhoids, a piece of bone, or other foreign body, which had been swallowed, often excites this inflammation, and permanent contraction of the muscular parietes of the rectum, thus inducing stricture. The coagulable lymph, which is thrown out in the contracted parts, becomes more and more vascular; they are increased in thickness till a stricture is completely formed.

The surface of the bowel, when examined by the touch, is extremely painful, irritable, feeling at the same time soft and pulpy, and its inner membrane thrown into folds. The coagulable lymph, which adheres to the surface of the gut, or extends across it in bands, may be separated by the end of the finger, and thus the inconveniences arising from it may be avoided. Sometimes the intestine gradually becomes so contracted as to admit with difficulty the smallest bougie. This state of disease is frequently the result of syphilis, (an opinion received in France, with which Mr. Calvert disagrees,) by

* See Wiseman, Lond. folio, 1676.

the suppression of cutaneous eruptions, or any local cause which will produce inflammation.

Sometimes the rectum is almost obliterated by the formation of tubercles. In one instance, related by Morgagni, they resembled conglobate glands. Compression succeeds completely in removing them.

The cancerous stricture of the rectum is ascertained by a hard tumour, which is discovered in the lower part of the gut, generally on one side; it is sometimes, however, found as high as the sigmoid flexure of the colon. It is probable that the scirrhus state of the rectum is generally the result of inflammation. Sometimes the sides of this intestine become so indurated, as almost to equal bone in hardness.

Hæmorrhoidal tumours sometimes adhere, in consequence of the inflammation, ulceration, and subsequent adhesion of their surfaces. If the tumours are recent, and afterwards collapse, a projecting membrane is formed so as to cross the intestine, which becomes thickened by the injection of coagulable lymph between its relaxed folds. When the tumours are of long standing, they do not recede, but appear like the tuberculated stricture above alluded to, with this difference, that the contraction of the rectum is more irregular in the tuberculated species.

SECT. III. *Of the Symptoms.*

Mr. Calvert divides the symptoms into two kinds; those incident to a change of structure in the part, and such as proceed from obstruction. In general, he considers the former as so obscure, with the exception of the last stage of malignant stricture, that they are scarcely perceptible to the patient. And as the symptoms of actual obstruction vary very much, and resemble other affections of the alimentary canal, it is necessary that the practitioner should be alive to the presence of the disease.

"A short time since, an elderly man consulted me respecting a disordered state of his bowels, accompanied with a copious discharge from the rectum of a ropy mucus, generally clear and transparent, but sometimes tinged with blood. Suspecting the nature of this disease, I examined the rectum, and at the upper part discovered a firm and rather irregular stricture, by which the calibre of the gut was reduced to one-third its natural size. Having suffered much from dysentery during a hard service in the late war, he was more willing to consider his symptoms as the remains of that disease than depen-

dent upon a contracted state of the rectum ; at all events, he was not satisfied with my opinion, and I saw nothing more of him.

“ Mr. Charles Bell, in the same respect, states, that having occasion to puncture the bladder by the rectum, he found his finger obstructed by a stricture, yet the patient did not know of its existence ; that at another time he was about to perform the operation for fistula in ano on a gentleman, and found a stricture so narrow, that it would not receive the point of the little finger ; but that neither before nor since the stricture was discovered has the patient been willing to admit that his symptoms arose from this cause.”

The bowels of the patient are at first torpid ; the strength and appetite continue good ; there is some morbid sensibility about the loins and sacrum, accompanied by an abundant discharge of mucus. “ But, on other occasions, there is either no peculiar sensation about the rectum, or, if present, it is so slight that it altogether escapes his notice, and no discharge of mucus is observed, unless with the fæces.”

Purgatives, for a time, alleviate the disease ; the fæces are accumulated in larger quantities ; slight colicky pains, oppression at the stomach, flatulency, eructations, swellings of the abdomen, with a sensation of tightness and distention in the direction of the colon, next appear.

“ The motions are very scanty, and produced with considerable straining. These symptoms are occasionally removed or moderated for a short time by a diarrhœa, the usual means by which, in cases of this nature, as well as in those of obstinate costiveness, arising from other causes, the alimentary canal is relieved of its superabundant contents. The patient now begins to feel still greater difficulty at stool, where he is often compelled to remain for a considerable time, or return very frequently, so that a great part of the day (usually the morning) is spent in ineffectual efforts to produce a sufficient evacuation from the bowels, a sensation still continuing, as if something still remained to be discharged. He is now sensible that some unusual cause of obstruction exists, and on examining the state of the evacuations, he finds that they are not only very scanty, but that, instead of being round, as during health, they have either a triangular form, or they are flattened like tape. By degrees the occasional attacks of colic become more frequent and violent, the tumefaction of the abdomen increases, and there is sometimes considerable tenderness upon pressure, with general symptoms of fever, indicating a degree of inflammation. Sympathetic pains are also

felt more or less in the head, groins, and lower extremities ; and there is not unfrequently difficult micturition, with retention, or even suppression of urine. In some cases there is a sensible intermission of the pulse, with palpitations of the heart, and a disposition to syncope ; symptoms which, in some instances, may be attributed to the pressure of the distended colon upon the inferior vena cava, or the abdominal aorta.

“ Purgatives, which had previously been of so much service in relieving the distention, &c., sometimes produce very alarming symptoms at a more advanced stage of the disease, unless administered with caution ; and, if ulceration has taken place, the passage of the liquid fæces through the strictured part is attended with very great suffering, particularly if it be of a cancerous nature. Still, however, as in the former case, they are employed by the patient ; but the fæces not being wholly discharged, a gradual, but immense accumulation eventually takes place, and either inflammation, attended with continued vomiting, and an everted motion of the alimentary canal, supervenes, and closes the scene, or the patient dies more gradually, oppressed in mind, and worn out by continued suffering.”

It may be well to notice, more particularly, those symptoms which distinguish this disease from indigestion, and which more directly characterize it. First, The distention of the colon, which is so great, that “ on placing the hand upon the abdomen, it may be felt loaded with wind and scybalæ, which, being intermixed by external pressure, or by the natural action of the gut, produce a kind of rumbling sound. Sometimes this distention is obvious to the patient, from an increase of sensibility in the part, giving rise to the sensation of a tight bandage over the abdomen. Secondly, The pain, which, in many cases, when the disease has made some progress, is felt more or less about the junction of the last vertebræ with the os sacrum, extending sometimes downwards as far as the feet, and chiefly in the direction of the large nervous trunks. Thirdly, The tenesmus, which is not accompanied with much irritation, or continued after a sufficient evacuation has been produced, as in cases where it appears more suddenly, and proceeds from an inflammation or ulceration of the internal membrane of the rectum, but, unless in the ulcerative stage of malignant stricture, amounts to little more than a teasing desire, without the power to discharge the matter accumulated above the stricture. In this case the force of the abdominal muscles is not directed upon the orifice

of the rectum, but upon the distended gut above the stricture; there is, in consequence, less pain immediately about the anus, and less disposition to prolapsus. Fourthly, The scanty motions, and their irregular or figured appearance. The latter effect, however, is not always present throughout the disease; for if the contraction be at the upper part of the rectum, the motions may be of the usual size and appearance; a circumstance which is owing, either to the excrement being forced through the stricture in too small a quantity to stimulate the rectum at the moment, or to the lower portion of the gut having lost the power of contracting unless when fully distended."

In carcinomatous stricture, the symptoms are somewhat varied. There generally attends these cases a burning sensation, with acute shooting pains in the seat of the disease; the patient suffers more from pain and more bearing down if a female; "and the retention of urine, from the state of the muscles about the urethra and neck of the bladder, is much more frequent and distressing in this than in the other forms of stricture; he cannot sit down, and becomes excessively anxious and restless. Frequently, also, it is not very long before the commencement of the ulcerative stage is denoted by a fœtid ichorous discharge from the anus; and when the ulceration is extensive, very abundant hæmorrhage may take place in consequence, or matter, forming in the vicinity of the stricture, penetrates in various directions, producing sinuses that communicate with the vagina in the female, and with the neck of the bladder and the membranous part of the urethra in the other sex. In both cases the wind and fæces, being in part discharged by these outlets, increase the sufferings of the patient, more particularly in passing along the urethra, which is necessarily inflamed, and highly irritable.

"Sometimes when, in consequence of ulceration, the internal membrane, and, indeed, a great portion of the substance of the stricture is destroyed, the alvine discharges are passed without much effort, but not without intense suffering, which I have heard the patient compare to the rushing of boiling vitriol over a raw and irritable surface. This state cannot continue long; the pulse sinks, and the patient dies from exhaustion: but, in many cases, the gut remains nearly closed to the last; the abdomen becomes enormously distended, chiefly with flatus; the breathing is laboured; the countenance is expressive of the utmost anxiety and distress; inflammation, with hiccough, and an inverted action of the intes-

tines supervene, by which death, as in other cases, is produced more suddenly."

SECT. IV. *On the Remote and Exciting Causes.*

In addition to the causes above related, strictures of the rectum may be congenital. Of a case of this kind, Dr. Baillie has given a drawing. Dr. W. Philip states, that it may result from a disordered state of the digestive organs.

"After this state of irritation has continued to recur for a great length of time, a degree of permanent spasmodic stricture appears to take place in the rectum. This I have known happen to such a degree as to give a tape-like appearance to the alvine discharges for many months, without intermission, and suggest the idea of organic stricture, till an examination of the part proved its real nature. A temporary contraction of the rectum, occasionally giving this appearance to the discharge, is not an uncommon symptom."

Colic, cholera morbus produce it, according to Howship. It has proceeded from cancer of the womb; (See the case stated by Wilmot, Dublin Transactions.) A varicose state of the vessels of the rectum sometimes prevents the evacuation of the fæces, and may be mistaken for this disease. Mr. Copeland states, that the adhesion of the sides of the rectum sometimes forms the obstruction. It is produced by inflammation, and may be easily broken through by the use of a bougie; it is, however, likely to return.

SECT. V. *On the Mode of Examining the Rectum.*

The situation, extent, and peculiar character of the stricture, are the points first to be ascertained. The rectum must first be cleared by a common glyster, the patient placed on his side, or rest upon his elbows and knees, and the finger, smeared with oil, must be introduced within the intestine.

"If no contraction be discovered, it may be presumed that one exists higher up, and a common plaster bougie, rendered somewhat pliant by warmth, and slightly bent near the end, so as to accord, in some degree, with the natural curvature of the passage, must be anointed in a similar manner, and gradually passed onwards, if no obstacle intervene, within the sigmoid flexure of the colon. This operation requires some caution and judgment on the part of the surgeon, for, if it is not performed with delicacy, the parietes of the gut may pos-

sibly be injured, or the upper axis of the pelvis being overlooked, the point of the bougie may be directed against the projecting part of the sacrum, and give rise to the idea of a stricture, when none in reality exists. At the same time, also, it is useful to bear in mind, that a similar mistake may possibly occur when the upper part of the gut, being distended with fæces, is forced down, and in some degree turned upon itself; or the cavity may be almost obliterated by the pressure of tumours, as in cases of enlarged ovaria, retroversion of the uterus, &c. I have seen the bougie employed for a length of time, in a case where a biliary concretion, having imbedded itself in the parietes of the rectum, caused a projection of the internal membrane; ulceration was eventually produced, by which an exit was given to the substance: and I have heard of a similar practice having been pursued where there was no other mechanical cause of obstruction, but what arose from an unusual projection of the sacrum. Mr. Charles Bell also mentions, that in one instance, which came under his own observation, the tumour formed by the fundus of the uterus, having fallen back into the hollow of the sacrum, was mistaken for, and treated as a stricture of the rectum. 'I was called,' he states, 'to give my opinion of the condition of a lady, after she had been three years under the use of bougies. She was very ingenious, and with her pencil she explained every thing she felt, and all that she had been ordered to do. But I urged the necessity of examination, and the possibility of there being some mistake; and, in fact, I found that the obstruction of the rectum arose from the fundus of the uterus having fallen into the hollow of the sacrum. Against this had the bougie been pushed regularly for years, and happily without further bad consequences than the expensive attendance of a surgeon.' "

In examining the intestine, Mr. Calvert advises the use of a full-sized bougie, on the same principles as in the case of strictured urethra. If its texture should be too hard, it must be made softer; and if, on its introduction, it should not be found to be of the proper size, a tent formed of soft linen may be substituted, first covering it with wax, or some stiff cerate. The latter plan applies particularly to those irregular projections of the internal membrane found at the lower part of the gut, and which are the consequence of inflammation. The bougie is to be used when the stricture is high up, near the colon. Mr. Calvert might have observed, that if the bougie be small, it may happen that the instrument may be pushed up between the folds of the intestine, particularly

where its internal coats are relaxed, and a stricture may be supposed, when in reality none exists. It should, therefore, be first examined with a bougie of the size of the gut. Sometimes, too, the sphincter contracts so violently on the finger, that the disease is principally referred to that circumstance, when a stricture high up in the rectum has escaped notice. The introduction of a long bougie is often necessary to reach the stricture. Mr. Calvert has omitted to mention, that the gut not unfrequently feels like a pouch to the finger, when introduced within it; and the accidental passage of the fæces through the centre of the stricture, at the time of examination, has discovered it. This fact should be recollected, as in cases where the intestine has that feel, a bougie has discovered a stricture above the reach of the finger. If neither stricture nor induration be discovered, a large-sized bougie may be introduced and passed as high as the colon,* about the termination of which, strictures most commonly exist: and from an analogous disposition in the intestine and urethra, it will be found, that when the upper contraction is of long standing, there occurs one or two lower down. This, however, does not always happen.

A mode of examination is favourably mentioned by Mr. Calvert, which certainly deserves attention. It consists of an "ivory ball affixed to the end of a silver wire, similar to the instrument used by Mr. Charles Bell, in what he has termed sounding the urethra. This instrument has certainly one advantage over the bougie, that not being compressed when the ball has passed the contracted part, the shaft is not grasped by it, but remains free; and, consequently, the existence of another stricture, and the state of the gut above may be more readily ascertained; besides, spasm, I believe, never exists to that extent in cases of stricture of the rectum as to render it difficult to withdraw the ball, a circumstance that is sometimes attended with great inconvenience, and even danger, in regard to similar affections of the urethra."

The speculum ani may be used in those cases where the stricture is seated just above the upper margin of the internal sphincter. If the stricture, however, is very rigid, it should be employed with caution.

"I have seen the injudicious use of the speculum ani, in cases of strictural disease, followed by shivering, sickness, and inflammation of the intestines, which had nearly terminated fatally; all of which were owing to the instrument being in-

* See White, 1815.

troduced farther than was necessary for the purpose of examination."

SECT. VI. *On the Treatment of Strictures of the Rectum.*

In the choice of a bougie, it may be observed, that it should be so stiff as to pass the stricture without bending, and so soft as to present an unirritating surface to the stricture. A bougie fit for every purpose may be formed "by dipping long pieces of lint or fine linen into a mixture of melted lard and wax; and in preparing them they may be imbued with any medicated substance, either by adding this to the liquid, or by again dipping the bougie in a separate mixture before the rolling is completed. I am inclined to think, that in many cases medicated bougies may be used with great advantage; and that, in depending solely upon the known efficacy of pressure, in cases of stricture, the additional advantage, that may be gained by the use of topical applications, has been too much overlooked.

"Tents for the same purpose may be formed of long slips of linen, which being folded, and secured at the end, are smeared with some ointment, or dipped into a stiff cerate, melted for the occasion, and then introduced by means of a common probe. Those so successfully employed by Mr. Desault were formed of slips of lint, tied into knots, and folded in the middle. They were then smeared with ointment, and passed into the rectum with a forked probe. The following is the method recommended by Mr. Charles Bell, in preparing the tent for those cases of stricture in which the common bougie is not admissible:—'Take a piece of lint, of a square form, roll it up in the form of a bougie, then tie a cord or strong thread very firmly round one end of it. A probe is now to be passed up the inside of the roll of linen, until its point is stopped by the tying. Where the cloth projects beyond the ligature, it is to be cut and rounded, so as to offer no obstruction when introduced into the rectum.—The tent thus formed is to be dipped in liniment or oil, and is ready for use. The probe gives it stiffness, so as to enable it to pass through the stricture; and the probe being withdrawn, the tent lies soft and pliant in the rectum.' This kind of tent is easily made, and will answer the purpose of compression as well as any."

A prepared gut of sufficient length to pass a little beyond the stricture is also recommended by Mr. Calvert, to be in-

troduced by means of a metallic or gum elastic catheter, and afterwards distended with water.

"As the compression from the dilated gut is equable and moderate, and the dilatation is not effected until the gut has passed the stricture, it is evident, that much less violence can be employed than with either the bougie or common tent; but it is certainly attended with more trouble, requires a much longer time in producing the necessary degree of dilatation, and should, therefore, be resorted to in cases only in which other means are not admissible."

Another method is recommended by Charles Bell, which Mr. Calvert has omitted to mention. A flat piece of sponge is soaked in strong mucilage, and then rolled up into the form of a bougie, and tied firmly with a cord, which should be oiled. When the sponge is dry and fixed in its form, the cord is taken off, and it may then be rolled between two polished plates; a string is next tied to the greater end; introduced into the stricture of the rectum, it imbibes the heat and moisture, and gradually distends the gut.

When the stricture is not cancerous; and the patient's health is good, a favourable prognosis may be given; and especially if, on employing the bougie, the passage dilate properly, as is evinced by the altered form of the evacuations. If the symptoms, however, do not abate, another stricture may be inferred, beyond the reach of the bougie. Sometimes, however, the distended state of the colon, and the prolapsus of the internal coat of the intestine, which sometimes attend it, may remain even after the stricture, or a general deranged state of the canal, is removed. If the disease of the rectum should be considerable, it is evinced by hectic debility, the extent of which symptoms will generally determine the degree of the local affection.

When the prognosis is favourable, the patient should be put upon a nourishing diet, which admits of so complete a digestion as to be carried off by the skin and kidneys; such as strong soups: milk and arrow-root induce a torpid state of the bowels; bread and vegetables cause flatulency, which, in all cases of intestinal obstruction is troublesome. The bowels should be kept gently open by some mild laxative; aloes, as it acts upon the rectum, should be avoided: the choice of the particular purgative is left to the individual. Castor oil is perhaps the best; clysters, frequently administered, answer a good purpose. The necessity of purgatives is particularly shown from the accumulations of fæces which take place in the colon, which should be as soon as possible removed. In-

jections of warm water above the stricture, by means of a gum elastic catheter, or a larger tube of the same material, will be found to assist their evacuation: their use, however, should be premised by a common glyster, as there may be a considerable collection of fæces in the rectum.

Leeches or cupping may be advisable, if there are symptoms of inflammation in the gut: strictures, however, often depend on a chronic morbid contraction, for which bleeding is generally unnecessary: sometimes mercury lessens the induration, and, as many practioners believe that it arises frequently from a venereal cause, and as it is extremely beneficial in some cases of strictured œsophagus, it may be advisable gently to touch the mouth.

These are the preparatory means. Pressure is the radical cure, excepting in a few cases where the knife may be used.

Sometimes the constitution suffers from the introduction of the bougie, without the patient being aware of the cause, as it often gives little pain. If, however, the pressure of the bougie, "although moderate, cause considerable pain in the situation of the stricture, extending to the groins, the thighs, or other parts; or if, after the bougie is withdrawn, general uneasiness, tremors, and sickness come on, we may conclude, that, in the present state of the patient at least, it will do more harm than good, and the common tent, or the dilated gut, should be substituted. As these symptoms, however, may proceed from violence in using the bougie, in cases where, if judiciously employed, it might be of essential service, it should not be discontinued, when found to disagree, without first trying one of a smaller size, and taking care to introduce it with delicacy and judgment. Indeed, in employing pressure in any form for the cure of strictures of the rectum, it should always be recollected, that the disease is in general produced and kept up by local irritation, and that violence of any kind is more likely to increase than remedy the evil. The surgeon should, therefore, be supplied with a number of bougies of different sizes and consistence; and the first that is used should be just large enough to produce a very moderate degree of distention. This may be withdrawn after remaining a few minutes, if it produce much pain or uneasiness; the time being gradually increased afterwards, as the part becomes habituated to the pressure. The size of the instrument must also be gradually increased, in proportion as the stricture is distended, until at last one of the largest diameter can be introduced, and retained with ease."

It often happens, that when the bougie is removed, the evacuation from the bowels is copious from the irritation of the bougie: the bougie may be withdrawn occasionally in order to permit the passage of the fæces, and prevent the distention of the pouch immediately above the stricture, and of the colon.

If the stricture consists of a septum, upon which little impression is made by the bougie, it may be divided by a bistoury in the direction of the sacrum. This operation is not dangerous, and has, since the time of Wiseman, been frequently performed. "In performing it, the fore finger of the left hand must be introduced within the rectum, and along this the above-mentioned instrument must be passed with the other hand, until its point is beyond the stricture, when, under the guidance of the finger in ano, the division may be performed in one or more directions; but sometimes it answers the purpose equally, and is safer, to divide the stricture towards the sacrum only, after which the cure is to be completed by keeping the bowels moderately open, avoiding any thing that may produce unnecessary irritation, and introducing a large-sized bougie daily, until the irregular projections formed by the division of the stricture are nearly reduced to a level with the parietes of the gut. This mode of cure is often the more requisite, because the narrow stricture, within reach of the finger, and formed chiefly by a projection of the internal membrane, is almost the only one in which the knife can be employed, and, at the same time, that in which the common tent and the dilated gut are useless, on the account of the excessive induration; and the bougies of firmer texture often produce so much pain and irritation, that they cannot be continued."

Mr. Calvert should have mentioned, that in performing this operation, it is necessary that the parts should be entirely in an uninflamed state, as, in consequence of its not healing, it may end in abscesses, and also that it is most successful when the stricture is not of a considerable extent. We may also state, that the formation of abscesses in the vicinity of the rectum, in the advanced stages of the disease, is very common;* the discovery and treatment of the stricture is therefore the first object; and if within reach of the knife, it may be divided at the same time that the sinus is laid open, and both may be treated together. Sometimes, Mr. Copeland states, the abscess breaks into the vagina, into which the

* Copeland.

fæces pass : Desault treated two cases of this description by introducing large tents into the vagina and rectum simultaneously, and to this circumstance he attributes his success.*

When the stricture is produced by tubercles, and the disease is not cancerous, pressure by the bougie succeeds well. When it proceeds from the agglutination of hæmorrhoidal tumours, the same plan will answer. Of which, the following case is a good illustration : " A female, the mother of a healthy family, had suffered severely by internal and external piles. Several of these tumours were united together ; and, as they were very numerous, they occupied a great portion of the rectum, leaving only a very narrow passage, about four inches in length. This patient suffered severely at stool, but, as injections passed easily above the obstruction, the diluted fæces still preserved some degree of form, showing the width of the contracted bowel. The disease continued to advance, and during six months mercurial preparations were employed without interruption, with a view to soften down the callosities which formed the tumour, and thus to open the passage. The retention of the fæces becoming still worse, I began to fear for the life of my patient. I made trial of tents of prepared sponge, which I formed into bodies of a pyramidal form, and rounded as much as possible ; but I found that they did not swell out equally, and formed inconvenient knots. I also made use of tubes of calf and sheep gut, distended with air, and with tepid water ; but these were difficult to introduce, though they did not give pain. I then had recourse to several other inventions, which did not succeed ; and I now hasten to the point. I got a turner to make me a wooden peg, in the form of a cone, blunt at the point, and of such a length, that the whole of it could be introduced within the rectum. It was made quite smooth, and polished. In order to withdraw it easily I attached a ribbon to it, by way of handle, smeared it with ointment, and then introduced it within the gut. It remained there some time without much inconvenience ; and the patient took it out, and replaced it herself without difficulty. I then requested the turner to make me a set of these instruments, differing in length, width, and size ; the patient and myself made choice of such as appeared most proper for the purpose, and she continued to use them for full two months. The great advantage she received from them was, that the injections entering with less pain, produced a good effect, and in a short time she had no occasion

* Copeland.

for them. In order to maintain the advantage she had gained, I advised her to continue the use of these suppositories occasionally; and the fear of a relapse induced her to follow my directions. A few months after, she was attacked with a slow fever, accompanied with hemorrhage at stool, at the termination of which she found herself perfectly cured, so that she was not only freed from all induration in the rectum, but also of several excrescences that were situate at the margin of the anus."

It may be proper to mention, that sometimes the kidneys are affected. Retention then, and not unfrequently suppression of urine, takes place; if the bladder be not distended above the pubis, the introduction of the catheter, from the irritation it occasions in the adjacent parts, which are highly excited, is improper. If the pain and irritation of the intestine are great, opium given in injection will be useful.* The use of the tube of elastic gum, by which water may be injected up the rectum, and the fæces evacuated, is perhaps the best means of relieving the pain which arises from the pressure of the fæces against the gut when inflamed or ulcerated.

If the disease is cancerous, little can be done. Dilatation of the passage so as merely to permit the passage of the fæces, with a soft tent composed of lint smeared over with some mild ointment, is generally sufficient: fomentations will be proper, if there is much pain and irritation: leeches also in the neighbourhood of the sacrum will be useful. The bowels should be kept in a lax state by castor oil, combined with hyosciamus, opium, or cicuta.

Other causes produce symptoms nearly resembling those of stricture, concretions of various kinds, as fæces, &c. near the sigmoid flexure of the colon. In the rectum, this state of things is not uncommon. "There is a sensation of weight and fulness in the rectum, extending to the colon, swelling and spasmodic pains of the abdomen, oppression about the hypogastrium, sometimes with vomiting, and even suppression of urine. Frequent, but violent and ineffectual efforts are made at stool, and either nothing is discharged, or only a small quantity of liquid fæces, and little or no relief is consequently afforded. If the cause be not removed, inflammation, with a true iliac passion, may supervene, and carry off the patient, or death may take place from a rupture of the colon, in consequence of the enormous distention, and the

* Copeland.

almost convulsive efforts of the patient to produce an evacuation."

The discharge of *faeces* prevents the medical attendant from suspecting the true nature of the case; "but the tumid state of the abdomen, the sensation of pain and pressure about the lower part of the rectum, the scanty evacuations, and the violent efforts that are made to procure them, are alone amply sufficient to distinguish the case from a common diarrhœa. This state of the rectum is very analogous, in some respects, to that of the bladder when over-distended; in both there is a partial discharge, whilst the organ still remains distended to the utmost, and, unless assistance be afforded, the consequences may be speedily fatal. If the accumulation be high up in the gut, a kind of valve is formed by the pressure and descent of the distended portion; and to the finger it produces the sensation of a large tumour, by which the parietes of the gut are pressed together towards the sacrum. This state of the parts, in fact, is nearly similar to that which exists when there is an accumulation of hardened *faeces* in some cases of stricture. An interesting case of this nature is related by the late Mr. Hey. It was attended with painful efforts at stool, and subsequently by vomiting, swelling of the abdomen, and total obstruction, so that the clysters which were injected were returned immediately. 'Upon introducing my finger,' he states, 'within the rectum, I found it empty; but its highest part was closed, being pressed against the os sacrum by a hard substance, which occupied the superior part of the pelvis. This substance felt like an enlarged uterus; enlarged, I mean, when considered in its unimpregnated state. I made an examination also per vaginam, and was still led to think that the uterus was pressed against the os sacrum.' This substance was brought away, though with some difficulty, by clysters, which were directed through a long flexible catheter, introduced within the rectum beyond the obstruction."

Mr. Calvert then mentions that severe pain in the hypogastrium and anus, in a young woman, was found to be owing to a hard substance pressing against the sphincter ani. The lithotomy forceps removed three balls of a light friable substance, each of which contained a plum stone in the centre, swallowed six years before.

A fatal case of obstruction is related in vol. X, of the Medical Commentaries. It happened in "an elderly gentleman, who, for more than twelve months, had been affected with diarrhœa. He had severe griping pains, continued

bearing down, and inclination to evacuate the contents of the gut. The day previous to his death, some pounds of indurated fæces were removed by means of a narrow spoon. More still remained; but syncope coming on, the operation was discontinued. In the same volume there is an account of an elderly lady, who suffered from obstruction in the bowels. Four large balls of excrementitious matter, about the size of a hen's egg, were extracted. The following morning nearly twenty more were discharged, and more or less continued to be passed daily, when a large dose of castor oil being exhibited, eighteen balls of the same bulk were discharged, and she was completely relieved. In another case of similar obstruction, also recorded in this volume, a large calcareous concretion, weighing eight pounds, was expelled, with an emollient clyster. The patient, a lady, had suffered the most excruciating tortures in the hypogastrium, for eighteen months previous to the discharge of this substance."

Plum stones frequently form the nuclei of concretions, which produce fatal obstructions.

Tumours in the vicinity of the bowels sometimes produce obstinate constipation; when it proceeds from hardened fæces, the treatment consists "in clearing the gut of a part of its contents, by means of a common scoop, after which a dose of castor oil should be given, and an injection of warm water employed to dissolve and bring away what remains in the rectum. Strong purgatives should, of course, never be given in the first instance. If the contents consist of biliary concretions, or other similar substances, it may be necessary to introduce the lithotomy forceps, in order to break them down, and extract them; and when the cause of obstruction is high up in the gut, we must rely chiefly upon warm injections, which, being conveyed beyond the indurated mass, serve at the same time to dissolve this, and to stimulate the intestine to contract, and force it downwards. The round hard masses of excrementitious matter often brought away in such cases, have, no doubt, been formed and retained for a long time in the cells of the colon; and, as I have previously stated, the excrement is sometimes accumulated to such a degree as to be almost incredible. Two or three brisk purgatives will continue to bring away copious evacuations of solid fæces, when little food has been taken for some time before.

"When the symptoms are not urgent, there is no difficulty in removing any hardened mass whatever from the rectum; for, with proper management, the anus may be gradually dilated until the whole of the hand may be introduced within

the rectum. This surprising power of dilatation is strikingly exemplified in cases, some of which are recorded, wherein a fœtus of five months,* or even of the full time,† has been expelled through the anus, without this part being ruptured, or in other respects materially injured. The fact is interesting, and may be of great practical advantage in many cases, as it may serve to show to what extent the anus is capable of being dilated, should circumstances render it necessary ; but it should be recollected, that, if much violence be used, complete paralysis of the sphincter muscles, independent of other minor affections, may succeed in consequence."

* "Duncan's Annals, Vol. II.

† "Med. Comment. by A. Duncan, Vol. VIII."

[*To be continued.*]

ANALECTA.

Contributions to the Medical Recorder. By G. BARKHAUSEN, M. D., of Bremen.*

1. Delirium tremens is one of those diseases which has engaged but little the attention of the German physicians of the present day. Whether this affection consists in arterial inflammation of the brain, or be owing merely to undue irritation of this organ, remains still to be decided. Opium, however, is the remedy which is generally and almost exclusively adopted for its cure. From the frequent opportunities I have had of witnessing this disease, I am convinced that it varies much in its nature in different cases, and requires, of course, some difference in its treatment. We should, in the first place, distinguish whether the disease be *symptomatic* or *idiopathic*. The latter form cannot certainly depend upon inflammation of the brain, but is the effect of continual irritation and congestion of this organ, produced by too great indulgence in spirituous liquors. Experience has shown, moreover, that this idiopathic affection may partake of a sthenic or asthenic character. The former has nothing inflammatory in its nature; and I include, under this form of the disease, such cases only in which the patient exhibits much power and energy in his actions. It occurs more particularly in young, robust persons, or such as have not been long addicted to the use of liquors. There is less tremor in these cases, and the pulse is, at the same time, full and strong. I have seldom derived much benefit from pure antiphlogistic measures in this variety of the affection, and there is no little danger in resorting to opium under these circumstances. I rely for the cure chiefly on the exhibition of *emetic tartar*, given in such doses as to produce nausea. It is best given in solution, dissolving five grains of the tartar in five ounces of water. The patient is directed to take a table-spoonful of this mixture every hour, increasing the dose until nausea is excited. Very frequently it is found necessary to add as much as twenty grs. of the emetic to the above quantity of water, before the desired effect will be induced. The patient, after this, falls into a pleasant sleep, which is much more natural and tranquil than that effected by the exhibition of opium. In a few cases only, have I failed to bring about this state by the use of the tartar emetic, and then I have had recourse to a small quantity of opium in the form of Dover's powder, given at bed-time. I am not a little surprised, that the nauseating plan of treatment should not have been adopted much earlier by other practitioners in delirium tremens, more especially as its good effects have been long observed in various other affections of the mind.

Where the disease partakes more of an asthenic character, as in habitual drunkards; where the tremor is considerable, the pulse small and frequent, recourse should be had to the various diffusible stimuli, given in large quantities. It is in this form of the disease that opium is especially useful, though I have found much advantage likewise from the exhibition of ammonia and camphor.

The *symptomatic* delirium tremens is that species of the disease which supervenes upon other affections, attacking those habitually addicted to strong liquors. I have seen it consequent upon fractures, dislocations, or

* We did not receive this valuable communication till it was too late, otherwise we should have given it another place.

other mechanical violence inflicted upon the body; it is sometimes united, also, with encephalitis, meningitis, hepatitis, pneumonia, &c. The disease, in this case, requires no particular management, but yields, in general, to those remedies which are employed to combat the original disease, as general and local blood-letting, calomel, counter-irritants, &c. Where it is more obstinate, it may be necessary to have recourse to opium. Blood-letting should be employed always with the utmost caution: I never resort to it but in persons of robust and plethoric habit, and then only when absolutely required.

2. Acute rheumatism has, of late years, become one of the most dangerous diseases of our country, on account of its tendency to attack by metastasis the brain and its membrane, or the heart and pericardium. The first form of the disease is by no means so frequent as the latter; but this is by much the most formidable. It is much more apt to make its attack in youth than in advanced age. The disease will be seen to shift to the heart and pericardium as freely in those cases accompanied with much pain and swelling of the joints, as in such where there is not much topical affection combined with the general fever. This metastasis is often so sudden and violent as to occasion immediate death; generally, however, the affection of the heart is more slowly developed, and we have all the symptoms expressive of genuine carditis. In some instances, the patient complains of dreadful anxiety, oppression, and pain about the region of the heart; he is subject to palpitation of this organ, and has frequent fainting fits; the pulse is at the same time frequent and tense, the urine high-coloured or cloudy, the skin very commonly dry and parched. The strictest antiphlogistic measures, carried to their utmost extent, will here be necessary. I have commonly found, however, most benefit from local bleeding, frequently repeated, together with the use of counter-irritants. In other cases, the patient complains merely of a little anxiety, sighs often, sweats very profusely, so that the perspiration rolls off him in drops.

The pulse is small and very frequent, and there is an undulating motion conveyed to the hand, when laid upon the region of the heart. After a time the pulse becomes more developed, but is undulating and weak. This is commonly a fatal symptom; for I have never seen a person recover under this state of pulse. The urine is cloudy, and deposits a lateritious sediment.

Antiphlogistic measures can only be resorted to in the very commencement of this form of disease; at a later period, I have found most advantage from the employment of musk, and particularly camphor, given in large doses. I have seen several patients, I think, saved by these remedies. Derivatives, with local blood-letting, will be found to aid these means, and should never be neglected.

The prognosis appears to me, upon the whole, much more favourable in the first than in the second form of this affection; but it is always a very dangerous disease.

On dissection, the pericardium is generally found red and highly injected, filled at the same time with a bloody serum. On the external surface of the heart itself, there may be observed, red spots of the size of a pea, resembling in appearance petechiæ; the inner surface is always more or less reddened. The valves of the heart, the pulmonary artery, and left auricle, appear to be most affected. The substance of the whole heart is much softened, as if boiled. At times, we find acute inflammation of the heart to lapse into a chronic state, and the patient survives many years under this affection. After death, in these cases, the pericardium will be found adhering, to a greater or less extent, with the adjacent parts and heart; one or both sides of this organ are observed to be prematurely dilated, and in a state of hypertrophy; and the valves are, at the same time, ossified.

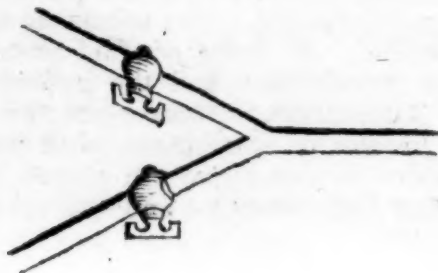
3. The intestinal glands, described by several of the older anatomists, and particularly by Peyer and Brunner, (whose existence, however, has been doubted of late years by Blumenbach and others,) I have frequently found enlarged, and in a state of suppuration, in children. In these cases, the membranes of the brain are always found inflamed; the brain itself in a complete state of hypertrophy; the stomach, and particularly its fundus, soft and gelatinous; and, in the more advanced stages of the disease, almost the whole villous surface of the intestines is destroyed. The mesenteric glands are, in general, very much enlarged too, and I look upon the disease as a form of scrofula.

4. Much has been said regarding the propriety of closing wounds of the chest during inspiration or expiration, in order to prevent the entrance of the external air, and various means have been resorted to with a view to discharge the fluids effused into this cavity, as blood, water, pus, &c. A friend of mine, in Copenhagen, writes me, that Professor Herholdt, of that city, instituted the following experiment, to determine these questions. He took a glass resembling in form the chest, the lower portion of which he tied round with a bladder, to represent the diaphragm; in the upper part was fixed a tube to represent the larynx, and an opening was made into the side, in lieu of the wound through the chest. The figure might be represented thus:



He found that when the bladder descended, as the diaphragm does in the act of inspiration, the external air rushed both through the upper tube and the opening upon the side; that, on the other hand, when the bladder ascended, and presented a convex surface in the glass, as the diaphragm does during expiration, the air was driven out through these openings. In this manner the professor has shown, that, in order to prevent the entrance of the external atmosphere into the chest, the wound should be closed during the act of expiration.

If we place, moreover, a square plate of lead, provided with a leather valve, over the wound in the chest, we shall find this valve to close up the wound during inspiration, and thus prevent the external air from entering the chest; whilst, during the act of expiration, the valve will be lifted up by the sole power of the diaphragm and lungs, and the blood, water, or other foreign matters contained in the cavity of the chest, in this manner expelled. This apparatus for clearing out the chest, has been of late much improved upon by Herholdt. He employs now, instead of the leaden plate, two metallic tubes, which, uniting together, form a single one; the two former being furnished with a stop-cock, as represented in the following diagram:



If it is intended now to inject any fluid into the cavity of the chest, the united portion of the tube is introduced into the wound of the breast, and the lower branch of the instrument being closed by the stop-cock, the upper, during the act of inspiration, is to be injected with the fluid, which sinks into the chest as the diaphragm descends. In order to permit the escape of this fluid again immediately from the chest, the upper branch, during the next expiration, should be closed by its stop-cock, and the lower one opened, when the liquid will be thrown out by the action of the lungs and diaphragm. We are enabled, by this successive play of these branches, to free the cavity of the chest, of water or other fluids effused into it, and to heal securely all wounds of this cavity. Professor Herholdt terms this latter instrument the *Pneumetonon*, and has used it successfully in cases of hydrothorax.

5. To the instances already enumerated, where a great number of needles have been swallowed, we may add another which has lately occurred. This is the case of a young girl in Copenhagen, from whose body there has been taken, in the course of six months, no less than 273 needles. Professor Herholdt first made the public acquainted with this case, in a small pamphlet which he published in 1822; and since this period, a number of other needles have made their appearance upon different parts of the same individual. It is not as yet completely ascertained in what manner these needles came into the body.

6. I read in the 34th volume of the *Journal Universel des Sciences Medicales*, page 208, that a certain M. Richard has given the iodine in blennorrhagy, and in cases of bubo. It were much to be wished, that all experiments, made with this remedy, be conducted with the greatest caution, as it is one of great danger. I have seen several cases of late, where this article has been exhibited in young girls afflicted with scrofulous glands, with much success; but who shortly afterwards died of confirmed phthisis pulmonalis.

7. *Notices from the German Medical and Surgical Literature, communicated to the Editor by Dr. G. VAN DEM BUSCH, of Bremen, Member of the Medical Society of Stockholm, and Honorary Member of the Medical Society of Philadelphia.*

From the second volume of the Transactions of the Medical Society of St. Petersburg.

(1.) Dr. HARDER observed in a man, 73 years old, labouring under attacks of gout, after the sudden disappearance of the attacks, an innumerable quantity of little pale lice upon the whole surface of the body, which, after being repeatedly removed, again re-appeared. It seems that the appearance of the lice was critical, for, after a new attack of gout, they disappeared suddenly.

(2.) A woman, aged thirty-five years, and nineteen years married, but childless, had never menstruated, and never suffered a vicarious bloody flux.

(3.) In another woman the menstrual flux had ceased four months, and she had been afflicted in this interval with slight bleedings from a tooth. There suddenly appeared from the same tooth a copious bloody flux, from five to six pounds, which ceased after repeated times. After some months the menses re-appeared, and the vicarious bloody flux from the tooth had not returned.

(4.) Dr. REHMAN observed, at Moskow, a girl who monthly lost blood, drop by drop, from the inner angle of the eye, for some days. She had not menstruated, and all attempts to restore the catamenial flux were in vain. When the girl was nineteen years old, the catamenial flux appeared, and the bloody discharge from the corner of the eye then ceased.

(5.) Dr. RAUSH relates the case of a woman whose perspiration had the smell and taste of vinegar.

(6.) Dr. HORDER gives an account of a boy whose sweat tinged his linen blue.

(7.) The same physician recommends, in cases of moles, to besmear the mole with concentrated nitric acid, and to repeat this operation, at various times, till the skin shrivels and drops off.

(8.) The powder of the root of *artemisia vulgaris* is recommended in the Journal of Practical Medicine, edited by HUFELAND, in cases of epilepsy, particularly in those in which previous symptoms announce the attack. If the prognosis appears, the patient should take a teaspoonful of the powder with warm ale: a profuse perspiration is the consequence.

(9.) The cold affusions in cases of croup, recommended by Dr. HARDER, has made great sensation, but has not been much used. Dr. Harder asserts, however, the utility of these affusions by some recent experiments and observations.

8. On Amputation. Letter to James Syme, Esq. from Mr. Robinson, Surgeon of the Convict Hospital Ship, Sheerness.

DEAR SIR,

18th August, 1824.

AN opportunity having been offered in this hospital of putting into execution the mode of amputation recommended by you in the LXXVIIIth Number of the Edinburgh Medical and Surgical Journal, I determined on adopting it. My patient, a lad of 18, labouring under an enlargement of the bones of the knee-joint, which had resisted repeated local bleeding by leeches and cupping, issues, blisters, embrocations and moxa, together with several courses of alterative medicine, submitted to the operation on the 2d inst. My assistant, Mr. Bayley, having undertaken to command the femoral artery by pressure with his thumb, I followed your directions in every particular, employing neither tourniquet, tenaculum, nor retractors; and, in comparison with the former mode of amputation, this was the work of a moment, with a great diminution of pain, little or no hæmorrhage, and with a surface that enabled every vessel to be seen on the instant. The stump has healed by the *first intention*, with the exception of the opening made by the ligatures, and a spot on the lower surface.

I had anticipated, from the very angular direction of the incisions, that the limb would have been too pointed, but it proves a round, full, compact stump; and, in the opinion of the naval and military surgeons, as well as that of my private friends who have attended the case, is very superior to those which result from the circular incisions. A pupil of Mr. Dupuytren saw it on the eighth day, and was much struck with the remarkable contrast between its uniting condition, and the charpee-covered stumps daily seen in the Parisian hospitals.

Your method has my decided and unqualified approbation, and I hope you may have the gratification of seeing it speedily adopted throughout the surgical world. The non-employment of the tourniquet is the point on which opinion will be the most difficult to eradicate, it having hitherto been considered as only to be laid aside from stern necessity. Some of my friends recommended that in this instance it should be left loose on the limb, and others that it should be kept in hand in case of being wanted; but I venture to assert, that neither those, nor any who may hereafter witness the small amount of blood lost, will hesitate one moment as to its rejection.

My colleague in hospital duty, Mr. Cullen, suggested the employment of the tailed bandage (with centre piece sufficiently long to supersede the cross pieces usually put over the face of a stump) instead of the circular roller. I found it very advantageous, enabling my assistant to remove the dressings without raising the stump from the pillow, and to apply pressure in a more uniform and easy manner. I am, dear sir, your faithful servant,

ARCHIBALD ROBERTSON.

P. S.—A convict on whom I had amputated some time ago, stole unnoticed into the Ward, and witnessed this operation. He was so struck with the rapidity of the process, and the diminution of pain to the sufferer, that he stopped me on deck to express his surprise at the *unnecessary* pain to which he had been subjected! I quieted his vexation by telling him, that this mode was not then known.

Remarks by Mr. Syme.—I feel much obliged to Dr. Robertson, with whom I have not the pleasure of being personally acquainted, for sending me this notice of a case so favourable to the Flap Operation; but regret that he should have said nothing of Mr. Liston's merits, as his not doing so may lead those who have not read my paper on amputation to imagine that I claim more than belongs to me.

Any credit which I deserve is not for inventing the operation, since it was invented long ago by many different people, nor for practising it, since, although others have performed it occasionally, Mr. Liston was the first in this country to adopt it in all cases; but for recommending it to the public by such arguments, and comparisons with the methods usually followed, as to awaken the attention of the profession. To Mr. Liston, I may add, belongs, without dispute, the honour of abandoning the tourniquet in this country, his reasons for which will be found in the LXXVIIIth Number of this Journal. For though some surgeons on the continent, as well as others in our own army, have recommended, by precept and example, the disuse of any mechanical contrivance for restraining hæmorrhage during amputation, I am not aware of any surgeon in Great Britain introducing such a proceeding into private practice previous to the time of Mr. Liston.

12, Dundas Street, 31st August, 1824.

JAMES SYME.

Trial for Poisoning with Corrosive Sublimate.—For the particulars of the following case we are indebted partly to the daily papers, but chiefly to the kindness of a gentleman who was personally concerned in the trial; and we believe our readers may rely with confidence on the accuracy of all the facts we shall have to mention. The case is deeply interesting to every practitioner. It has excited a great deal of speculation in the neighbourhood of the place where it occurred, both on account of its complexity, and by reason of the station of the person who was charged with the crime. It turns chiefly on the medical evidence; which, therefore, occupied a great proportion of the time spent in the trial. And we have great pleasure in declaring our opinion, that almost the whole of the evidence is unexceptionably good, does great credit to the individual who was the chief crown witness, and furnishes an excellent example of the decisive information which may be supplied even in the most complicated cases by a person qualified to conduct medico-legal inquiries.

Mr. Hodgson, a surgeon in Sunderland, was indicted on the 18th of August, at the last Durham Assizes, for administering poison to his wife, with the intent to murder her. The history of the woman's illness is the following: At the time the attempt was supposed to have been made, she was labouring under an attack of acute rheumatism; on account of which a physician, Dr. Brown of Bishop-Wearmouth, attended her nearly from the beginning. When he first visited her, he found her mouth slightly affected with calomel. He ordered the *vinum colchici* to be taken, with occasional anodynes and laxatives; and a few days afterwards, in consequence of her being seized with considerable pain about the side and stomach, he bled her, and directed a blister to be applied over the stomach. These accessory symptoms soon subsided, the affection of the mouth also went away, and, at length, when her rheumatic complaints alone remained, he ordered the calomel to be resumed in the dose of six grains every evening, with two or three grains of opium made with it into a bolus. Laxatives were also given occasionally in the morning. She had taken three,

or at the utmost four doses of the calomel and opium with some relief to her complaints, and without experiencing any unpleasant sensation in swallowing them,—when, on the 6th of June, about a fortnight after Dr. Brown was first called to attend her, she was attacked immediately after taking the same medicine with violent burning in the throat, gullet and stomach. Upon this occasion she had desired that the bolus should be divided into three pills, which was accordingly done. The first of them produced so painful a sense of burning, that she expressed her belief that some mistake had been committed; but she was nevertheless persuaded to take the other two, which immediately increased the burning sensation to such a degree that she cried out. In about five or ten minutes a draught was given her, after which she felt sick; and in a few minutes more she began to vomit with violence. Dr. Brown was accordingly sent for, and arrived about an hour or an hour and a half after she had taken the pills. He found the pulse small and frequent, and the skin bedewed with a cold, clammy sweat; she complained of a constant and severe sense of burning in the fauces and throat and along the course of the gullet down to the pit of the stomach; she vomited at short intervals large quantities of mucus, and rejected every thing she drank; but the bowels were not then affected. Dr. Brown, suspecting that some mistake might have been committed, inquired whether it was possible that the person who compounded the pills could have used tartar emetic instead of calomel, but found that this was almost impossible. He ordered an anodyne draught to allay the irritability of the stomach; it was compounded by the prisoner and swallowed by the patient in Dr. Brown's presence; but was almost immediately discharged again. He then ordered a simpler anodyne draught, consisting merely of laudanum mixed with two drachms of water. The prisoner went down stairs to prepare it, and brought it into the patient's room, where Dr. Brown had remained. The latter, on taking the glass from the prisoner, remarked that the draught was "more than twice" as bulky as it should have been, and likewise more turbid; he proceeded to taste it, and was astonished to find that it had an acrid abominable taste, like that of corrosive sublimate. His suspicions naturally took a different course, on making this discovery; and on the presumption that the same substance might have been taken in the pills or draught administered before his arrival, he gave her white of eggs as an antidote. From this remedy she experienced immediate and decided relief. Owing to some unaccountable and most unjustifiable omission on the part of the king's counsel and of the judge, the patient's history was not traced any farther on the trial. But we know from the best authority, that next morning she was affected with slight diarrhœa, and on the third day with ptyalism; but she gradually recovered from her dangerous symptoms, and was able to give evidence when the prisoner was tried.

The draught which Dr. Brown received from the prisoner, and which he suspected by its taste to contain corrosive sublimate, was preserved and carefully analyzed by a practised chemist, in presence of the Doctor and two surgeons, who saw the patient on the first evening of her new illness. Carbonate of potass produced in it a pale brick-red sediment, ammonia a brownish-white precipitate, lime water a yellowish-brown precipitate; and when acted on by galvanism, it amalgamated gold. These results left no doubt in the minds of the gentlemen present, that corrosive sublimate was contained in the draught; and the quantity was estimated (by what means is not stated) at 13 grains and 11-13ths. Part of the matters vomited was also subjected to analysis, but no mercurial substance was detected in them. These matters, however, were not preserved till the white of eggs had been administered, and only after the patient had been vomiting incessantly for more than an hour. Little evidence was procured of the actual composition of the pills she swallowed. A minute portion was found by

Dr. Brown and the two surgeons on the slab on which it was supposed they had been compounded; and these three gentlemen, together with the prisoner himself, agreed that it tasted like corrosive sublimate; but the small portion they found was consumed in tasting it, so that no chemical test could be applied to it. No information could be procured of the nature of the draught administered before Dr. Brown's arrival.

Such are the medical facts of the case. Before offering any comments on their import, and the light in which they were viewed by the medical witnesses and the court, we shall give an abstract of the moral evidence also. Mr. Hodgson appears, by the testimony of many of his intimate friends and of his servants, to have uniformly conducted himself towards his wife with great humanity, "and with that affection which should always be wished for between man and wife." From the first period of Dr. Brown's attendance on his wife, he had been in the habit of giving Mr. Hodgson his prescriptions verbally; and it appears that the latter, in compounding the medicines prescribed, had been in the custom of altering slightly the ingredients and their proportions. This was generally told to Dr. Brown, who did not disapprove of the changes, as they were immaterial. On the evening of the 6th of June the apprentice who had made the former boluses with six grains of calomel and from two to four grains of opium, was told by his master to make one with eight grains of the former and half a grain of the latter. About ten, his master came to him in the shop and told him he was not to sleep there as usual that evening, because the two servants who slept with a child were incommoded by the heat of the weather, and one of them was to occupy his bed. The boy accordingly went home. The bolus was brought to Mrs. Hodgson's room by the apprentice a few minutes before the preceding conversation took place between him and his master. Not long afterwards, Mr. Hodgson entered the room and took away the bolus, without making any observation. No one saw what he did with it. The apprentice had left the shop by that time; and the servant who was to sleep in it, and had gone down to make the bed, did not see him do any thing; but she was not always in such a situation as enabled her to see what was done at the marble slab; and, besides, she left the shop soon after the apprentice, so that the prisoner, who had left it before her, might have returned unseen. Not long after he took the bolus from his wife's room, he returned with it, saying he had put half a grain more of opium into it. She then asked him to divide it into three pills, which he did accordingly. He gave her them himself, one after the other; and when she expressed a suspicion after taking the first, that some mistake had been committed, he assured her they were quite right, and that "she must keep it (the first) down, or she would have the same to take over again." Afterwards, when she complained of increased pain, so that she was obliged to cry out, he gave her a draught of his own compounding, not ordered by her physician. Finding herself getting still worse, she desired him to send for her mother who had left the house about half an hour before. He made some slight opposition to this, but nevertheless allowed his wife to send the servant for her. Soon afterwards he went himself for Dr. Brown (at whose suggestion does not appear from the Report, although surely that important point must have been ascertained). He told Dr. Brown his wife had been seized with symptoms of inflammation in the stomach. On arriving together at the house, Dr. Brown expressed his suspicion that tartar emetic might have been used by the boy instead of calomel; but the prisoner said he had perfect confidence in the boy's exactness in compounding medicines. When the Doctor discovered that the second draught contained some acrid substance, the prisoner tasted it and agreed that it tasted like corrosive sublimate. He then attempted to give some explanation as to the presence of corrosive sublimate in it, observing that he had been preparing an injection for a sailor, which contained five grains to the ounce of water. "He repeatedly re-

quested that the draught might be destroyed ;"—“ and something was said about saying nothing more about it in the event of Mrs. Hodgson recovering ;” but the witness, who stated this, was not allowed to explain himself. When the surgeon, who was then sent for at Dr. Brown’s request, arrived, the prisoner observed to him, that “ he considered Dr. Brown had very unnecessarily caused a great deal of alarm in his family ;” and repeated to him his wish that the draught should be destroyed. A second surgeon afterwards arrived. When the three medical attendants went with the prisoner to the shop and tasted the matter on the slab where the bolus had been compounded, he agreed with them that it tasted like corrosive sublimate. Finally, when the constable arrested him, he observed “ it can’t be helped now,” and accompanied him quite freely. On his examination before the magistrate, he said “ it must have occurred through mistake, as the bottle containing the powdered opium, and that containing the corrosive sublimate stood together ; and he was in a state of intoxication at the time.”

The following points of evidence were likewise adduced, relative to the possibility of the medicines in the shop being confounded—of the prisoner being drunk—and of his being insane. The powdered opium and corrosive sublimate stood together ; the calomel (in a state of powder) in a bottle separated by a partition from the corrosive sublimate, which was in crystals ; and the tartar emetic in a totally different part of the shop. One of the servants deposed that her master was drunk ; but all the other witnesses, seven or eight in number, agreed that he was sober. His wife thought him insane for six months before, because “ he used to go about the house with fewer clothes on him than he ought to have ;” but no other evidence was adduced to this effect.

It is apparent that the medical and moral evidence are so interwoven in the case now stated, as to render their separation very difficult. In the following remarks, we shall keep them as much apart as possible.

1. Was poison given in the bolus ? This question, we apprehend, will be answered in the affirmative by every person who takes an extended view of the symptoms of poisoning and of natural disease. No natural disease could produce a sense of burning from the throat to the epigastrium, *so very sudden and so very acute*. And that it arose from some acrid substance being swallowed, is rendered even more distinct by its being aggravated by each pill, and by its occurring immediately on their administration. We say *immediately*, not in the vague sense in which the word is used by witnesses even of the medical profession,—but in its most decided signification ; for it is probable that but a few seconds would intervene betwixt the swallowing of each pill. Several of the witnesses allowed that bile might have caused the sense of burning. But this was out of the question in the present case, as Dr. Brown very properly mentioned. Bile would not cause a sense of burning so very acute ; and besides, the sensation existed before the patient began to vomit. This appears, therefore, to be an instance in which, contrary to the opinion of Orfila and other medical jurists, a witness might swear to the fact of general poisoning from the symptoms only.

2. Was poison given in the first draught prepared and administered by the prisoner ? It caused immediate vomiting ; but this is no proof of its having contained poison, and no other was adduced.

3. What was the poison in the bolus ? In answering this question, it is requisite to pay some regard to the moral evidence. Suspicions being entertained, the answer must be given, if possible, with a view to these suspicions.—It appears highly probable, if not almost certain, that the poison was corrosive sublimate, and that it composed the greater part of the bolus or pills. This is shown by the violent sense of burning suddenly produced, such as scarcely any other solid poison could produce ; by the speedy relief

derived from the white of eggs; by the subsequent ptyalism; by the taste of the stuff on the marble slab where the bolus was compounded, or re-compounded; and by the fact that this poison was very nearly given a short while afterwards,—whether by accident or design, we do not at present inquire. Most of these grounds of opinion, especially the ptyalism, are singly equivocal, we admit; but, taken conjunctly with each other, and with the fact of general poisoning being already proved, they form a basis sufficiently substantial. When the case was first stated to us, we were disposed to think, that decisive evidence might be procured of the nature of the bolus, by learning whether the patient did or did not perceive the horrible and undisguisable taste of corrosive sublimate. But we must change that opinion. Our correspondent, to whom we applied for information on the subject, says, that she was so completely engrossed by the exquisite sufferings of the moment, that her physician could never get a clear answer from her concerning the taste of the pills. We shall assume that she did not perceive in them the powerful, acrid taste of the poison suspected. Had she been taking any article of food, or any thing but medicine, then we should most probably have said that corrosive sublimate could not have been taken. But many persons either purposely or involuntarily use means for preventing the taste of medicines being perceived. This may be effected either by holding the nose, or by bringing the *velum pendulum palati* over the internal opening of the nostrils. The latter mode, if practised dexterously, will enable one, as we have often personally experienced, to swallow untasted the most disgusting compost a physician could invent. Indeed, we have sufficient practical proof of the possibility of tastes being not perceived, in the frequent accidents arising from oxalic acid being mistaken for Epsom salt. No one would drain a bowl of strong oxalic acid if he perceived its taste.

4. But was there sufficient evidence that the *third* draught contained corrosive sublimate? The precipitates were indistinct in colour, as it was to be anticipated from the draught containing a little laudanum; still they approached in appearance to their characteristic colours; and the inference that they indicated corrosive sublimate, was rendered good by the effects on gold, with the aid of galvanism. But why did not the experimenters evaporate a little of the solution, and use the test of sublimation? Why did they not try the sulphureous test? Why did they not prove the existence of hydrochloric acid, and thus show that the mercurial preparation could be nothing but corrosive sublimate? As their experiments stood, it might have been any other soluble salt of mercury as well as corrosive sublimate. These, to be sure, are also poisonous; but we must reprobate every appearance of want of precision in medico-legal inquiries.

5. Could the corrosive sublimate have been administered by mistake? This is properly a question which the jury alone should answer; but in this particular case it is one which requires much medical knowledge to answer correctly; at least a great deal more than either the jury could or the judge *did* possess. We shall therefore offer a few remarks upon it. If a mistake did exist, it must have been a systematic one, since the same substance was used twice. Hence the prisoner must have first mistaken corrosive sublimate in the crystalline, or powdered state, for calomel, or powdered opium; and then he must have mistaken a strong solution of sublimate for water. Dr. Brown shows, that the *first* was an unlikely error. Mistaking corrosive sublimate for powdered opium was out of the question; and mistaking it for calomel was unlikely, as the former was in crystals and the latter in powder; and, besides, they were not so placed in the shop as to render a mistake probable. The *second* mistake was not dwelt on very fully at the trial; at least no circumstances regarding it were pressed for, except such as favoured the prisoner. Thus the medical witnesses agreed,

that Mr. Hodgson, being a man of information, must have known, that the draught he brought would strike the physician as differing in quantity, and perhaps even in appearance, from the one ordered; and likewise, that it was such as would be at once vomited by the patient, and consequently do little harm. We need not offer any remark on these statements; they are evidently of no weight, and cannot lead to any sound conclusion as to the prisoner's motives. But it is singular, that no attempt was made to prove the possibility or impossibility of the solution of corrosive sublimate being mistaken for water. Did the prisoner keep a solution in his shop? It appears not; for when he attempted to explain the supposed accident, he said, "He had *prepared* one for an injection for a sailor." Could he have taken part of that injection? No. It was not strong enough. It contained but five grains to the ounce; and that which his wife was on the point of taking, supposing it to have been even thrice, (instead of "more than twice,") as much as what Dr. Brown ordered, must have contained about 18 grains and a half per ounce. Mr. Justice Bayley, following the humane practice among the English Judges of acting as counsel for the prisoner, suggested in his charge to the jury, (as we are informed by our Correspondent,) that the corrosive sublimate might have got into the draught by having been accidentally dissolved in the laudanum. The absurdity of this conjecture may be forgiven in consideration of the principle which prompted him to hazard it. Of late, however, we have observed many parallel occurrences. It would be desirable, that when the Judge undertakes to make the physical sciences square with his ideas of the case, he would use more mercifully his privilege of infallibility. On the question of the prisoner's motive, we do not consider it necessary to offer any farther remarks. We have noticed it, because it hangs partly on medical evidence; and to this view of it we have confined ourselves. The prisoner was found *Not Guilty*; and therefore it would be equally indelicate and unnecessary to view the question with a reference to the other grounds of judgment.

We recommend the case to the careful consideration of every student in legal medicine. The evidence, we repeat, is, on the whole, admirably correct; and we are assured it has been faithfully reported. The report we have followed is in the London Courier for August 21st.

10. *Cancer cured by the antiphlogistic plan of treatment.*—CASE I. (By Professor Lallemand.) "Adelaide Menestrier, sempstress, aged 20, in July, 1816, perceived the formation of a tumour in the left iliac region, attended with pain. Leeches and emollients were applied at intervals during four months, but without relief. The abdomen enlarged considerably; the patient passed purulent matter by the anus: she then got easier, and the size of the abdomen diminished. In December she went into the Hospital St. Antoine, and staid there five weeks, but without improving. The symptoms increasing, she entered the Hotel-Dieu, January 16, 1817. She was in the following state: severe, lancinating pains in the abdomen, particularly in the left iliac region, where pressure was insupportable; pain on motion; deformity of the neck of the uterus, and a tumour as large as a child's head, occupying the space between the anterior superior spine of the ilium, and linea alba, and filling the whole of the iliac fossa. The tumour was evidently formed in the uterus or its appendages, as the action of one hand applied to it could be distinguished by the finger of the other in contact with the cervix. The lancinating pains and the fœtid discharge from the vagina indicated the ulceration of a carcinomatous tumour. The weakness was extreme: the patient sleepless and hectic. Prescription: diluting drinks; emollient injections; warm bath; twelve leeches to the left iliac region, and narcotic cataplasms.

"On the 17th, the patient in the same state: prescription repeated.—18th. Extension of pain to the hypogastric region: twenty-four leeches to the left iliac and hypogastric regions.—19th. Less pain, but pulse febrile,

and evening exacerbation more severe : thirty leeches to the same parts.—20th.—Fever continues ; other symptoms less severe : twenty-four leeches : other remedies as before.—22d. Eight leeches, anodyne potion, &c.—23d. The same measures continued, except the leeches, and with the addition of opium and calomel until the 30th.

“ January 30th. Pain and fever more intense : fifteen leeches to the hypogastrium.—February 3d. Pain : frequent pulse ; evident diminution of the size of the tumour : fifteen leeches.—4th. Six leeches : a warm bath.—6th. Severe pain : belly painful on the least pressure : twelve leeches : bath.—8th. Considerable improvement, continuing for some days, with slight interruptions.—19th. Increase of the size of the tumour : tumefaction of the belly : ten leeches to the abdomen ; five to the vulva.—20th. Improvement : prescription repeated.—27th. No remarkable change : twelve leeches.—28th. Ten leeches.—29th. A blister to the inner part of the left thigh.—March 4th. The tumour appears to be reduced to the size of an egg : occasionally pretty severe pains are felt in it : eight leeches.—6th. Marked diminution of the size of the tumour : absence of pain : narcotic cataplasms and injections ; opium internally : increased diet.—8th. Exacerbation : fifteen leeches.—10th. Ten leeches to the vulva ; a slight sanguineous discharge by the vagina.—11th. Improvement : return of strength : cessation of pain : the tumour to be felt in the left iliac fossa, flattened, and as large as a small hen's egg.—14th. The patient left the Hotel-Dieu.

“ Her health continued to improve.—April 17th. The menses re-appeared, and the patient amended still more ; but about the end of the same month, she relapsed : the belly became painful : symptoms of gastro-enteritis and lancinating pains announced the return of the tumour. The application of twenty-five leeches, baths, local emollients, and a blister, quickly checked these accidents : after some aromatic vapour baths, the menses again appeared. Four months afterwards she was perfectly recovered. On the left side of the pelvis, a tumour could be felt as large as a nut, but the neck of the uterus had regained its form. M. Lallemand again saw her, eighteen months after leaving the hospital : she had two or three times experienced attacks of severe pain in the left side of the abdomen, which she had relieved by the application of leeches, without consulting any one.

CASE II.—(By Professor Lallemand.) “ Michelle Bahaud, aged 25, experienced lancinating pains in the left breast, and discovered in it a little tumour, at first moveable under the finger, but at the end of six months as large as a nut, and very painful upon the slightest touch. After a year spent in unavailing attempts to effect its resolution, the patient was informed that she had a schirrous tumour in the breast, which required a speedy extirpation. She refused to submit to the operation : the disease made progress ; symptoms of phthisis displayed themselves, and the patient entered the Hotel-Dieu, December 14th, 1816, in the following state : a hard, bossy, irregular, sub-cutaneous, tumour, of the size of a large goose's egg, occupied the middle of the outer side of the left breast : the patient experienced constant dull pain there, and occasionally, intolerable lancinating pains, extending over the whole side of the chest and shoulder. For five or six months she had but little sleep : she was extremely emaciated ; her skin was dry, always hot, and covered with furfuraceous scales : every evening she had a febrile exacerbation, lasting a great part of the night, and terminating by copious, viscous, sweats : she had several attacks of hæmoptysis ; coughed continually, and expectorated a great quantity of thick, puriform matter. The symptoms not leaving any hope, nothing was prescribed, for a fortnight, but ptisans, &c. The pain in the breast, and the pulmonary symptoms, becoming more severe, and the patient earnestly requesting relief, M. Lallemand ordered the application of

eight leeches, a bath, and emollient cataplasms. The pain, the fever, and the cough, having sensibly diminished, the application of leeches was repeated in four days. At the end of ten days, the tumour being less hard, the cough, spitting, and fever having diminished, M. Lallemand, encouraged by this success, continued the same treatment, and ordered a low diet. The tumour gradually became soft and diminished in size: in two months and a half it was not larger than a small hazel nut: the pulmonary symptoms had disappeared, and the patient had regained her colour, with much of her flesh. In that space of time one hundred and twenty leeches had been applied, and the patient had lived on broth, milk, rice, &c. She was unwilling to remain longer in the hospital, but continued the same treatment after leaving it. In another month and a half the tumour had disappeared, and Michelle had regained perfect health.

CASE III.—“A lady, aged 52, whose health had been much disturbed at the period of the cessation of the menses, felt, in August, 1819, occasional pains in the left breast, which recurred, periodically, every month. At the end of six months an oval tumour presented itself, as large as a hazel nut, and moveable under the skin. Its size gradually increased, and in three months more it was as large as a goose's egg; it was then hard, knotty, uneven, and lancinating pains were felt in it at intervals. The skin covering it was tense, shining, and variegated with small vessels. Friction with a narcotic tincture rendered the pains more intense and more constant. The skin thinned towards the middle of the tumour; a fissure presented itself, discharging a purulo-sanguinolent matter, of an offensive smell: the patient got no sleep; digestion failed, and rapid emaciation took place. The removal of the breast was proposed, but the patient refused to consent. By the advice of M. Olmade, of Montpellier, emollient and narcotic cataplasms were applied to the breast, and changed every four hours: and at the same time leeches were applied every three or four days, the bleeding from their bite being encouraged for several hours. The patient finding relief from this treatment, persevered in it: the pains diminished insensibly; sleep and appetite returned; the tumour diminished; the broken surface healed; and in the space of two months the patient was entirely relieved from her complaint. In that time about one hundred leeches had been applied.

CASE IV.—“Antoine Durand, at the age of 45, discovered a little pimple in the middle of the lower lip, which burst on the sixth day, and gave rise to a little ulceration, that healed after some applications of nitric acid, but opened again in six weeks, and remained stationary for four years: scabs formed on its surface, fell, or were torn off, and were soon replaced by new ones. In 1819, a surgeon cauterized the lip with nitrate of silver, which formed an eschar, the separation of which exposed an ulcerated surface of considerable extent. The whole of the lip then swelled and became painful. After an application of corrosive sublimate, all the symptoms increased: the pains became more acute and more frequent; the edges of the ulcer were everted, and such a loss of substance from the middle of the lip ensued, as to prevent the mouth from being closed. May 8th, Durand entered the Hospital St. Eloi. M. Lallemand recognized the cancerous character of the ulceration by the hardness and eversion of its edges, and by the lancinating pains. He ordered the application of eight leeches about the lip, to be followed by an emollient cataplasm. The induration and pain diminished. On the 12th, the same number of leeches was applied, and the amelioration was still more marked.—13th. Eight leeches again, at the patient's own request.—22d. The pains had almost ceased, and some progress towards cicatrization was perceptible.—June 13th. The pains had altogether disappeared, and there remained only a little flap of the edges of the ulcer, as large as a lentil, and which was removed by the knife. In a few days afterwards, the patient left the hospital completely recovered.”

[From Anders' Quarterly Journal.]

11.—*Report of Ocular Diseases at the General Hospital, Fort Pitt, from 21st Dec. 1822, to 20th Dec. 1823.* By George R. Melin, Assistant Surgeon.

Ophthalmia.—For some time before I was placed in charge of the ophthalmic division of this establishment, I considered that acute ophthalmia, in general, was treated too actively, and that a mere local inflammation could not require such extensive general depletion as was usually practised and recommended; and, from having witnessed the good effects of a solution of lunar caustic in some cases of gonorrhœa, both in allaying the pain and suppressing the discharge, I was determined, the first opportunity, to try its effects in inflammation of the conjunctiva, a similar membrane to that lining the urethra, and where the only danger attending its use in the latter was not to be apprehended. The strength of the solution I employed was four grains to the ounce of distilled water, which I dropped into the eyes twice a-day: it excited pain and a sensation of roughness, with an increased flow of tears, for about ten or twenty minutes; after which the eyes felt much relieved, and in a few days the cure was effected.

Since that period I have treated nearly *three hundred cases of acute ophthalmia*, some of them of a severe nature, in a similar manner, without either local or general bleeding, and I have had ample opportunities of proving its efficacy. One very material advantage attending this mode of treatment is, that the inflammation is subdued without leaving any chronic disease, either in the eye-balls or lids; whereas, by the antiphlogistic plan, (though the active inflammation be removed, and the eye saved,) it frequently leaves the vessels in such a debilitated state, that you have a more difficult and tedious disease to contend with, and one which frequently renders vision imperfect. I have received, from several of my professional friends, to whom I communicated the plan of treatment, very satisfactory accounts of its efficacy in their practice; and from Mr. Beard, of the Artillery, who has had much experience in ophthalmic complaints, and who saw many of my cases, I some time ago received a letter, from which the following is an extract:

"I have used the caustic solution in about thirty cases of acute ophthalmia, and, with the exception of two, (and in those exceptions I was not my own master,) without any auxiliary aid from bleeding, purging, or external application, or even abstraction of the stimuli of light, heat, or meat diet, &c. In the excepted cases, I was ordered to bleed, and pursue otherwise the antiphlogistic plan, on account of the pain over the orbit appearing to have been increased by the solution. In these two cases, the bleeding did immediately remove the pain in the orbit, but the conjunctival inflammation was not at all subdued; and the caustic was again tried, and almost instantly succeeded. I must, in addition, state, that I was not at all sure these two cases were purely and fairly adapted to the caustic treatment. In one of the two men, I suspected he either falsely represented his case, or wilfully aggravated it. In the other, I had reason to believe the iris was concerned. Altogether, I can aver that my success in the caustic plan has been most constant and decided. I have observed that the inflammation of the conjunctiva has not only been rapidly subdued, but that the cure has been remarkably perfect, inasmuch as no elongated or debilitated vessels were left."

Chronic Ophthalmia.—My treatment has consisted principally in the use of solutions of caustic, varying in strength from four to six grains to the ounce, according to the state of the granulations. If they were very vascular, I employed the weak; if pale and indolent, the stronger; and, in a few cases, where they were remarkably pallid, flabby, and indolent, I employed more active stimulants,—such as solutions of oxymuriate of mercury in the vinum opii. These applications were dropped into the eyes twice a-day, and thus exerted their influence on the opacity and vascularity of the cornea, as well as on the granulations, and the improvement on both was progressive.

Under these gentle remedies, the absorption of the granulations gradually took place, and the vessels of the conjunctiva were restored to a healthy state. I never found it necessary to employ any escharotic; and I am certain that the mild treatment which I have detailed, is attended with more rapid and general benefit and safety to the organ, than that of producing a deep slough, by bluestone or other escharotics, as formerly practised. Long before the granulations or villosity of the lids were removed, the vascularity of the cornea subsided; and, as soon as the lids became smooth, I usually laid aside the solution of the nitras argenti, and, for the remaining opacity of the cornea, I used solutions of the oxymurias hydrargyri, from one to three grains to the ounce of the vinum opii, and other stimulants, according to the susceptibility of the eye to their action; but, when the solution of caustic agreed with the eyes, and the opacity of cornea yielded to its use, I of course continued it, as will be seen by the two accompanying cases.

In a few cases, I found considerable benefit from an alterative course of mercury; but in this and other constitutional treatment, the practitioner must be regulated by the general state of health of the patient; and his success in many of these chronic cases will, in a great measure, depend on the attention and skill which he displays in restoring the system to a healthy state.

Cases of Acute Ophthalmia. Case I.—William Wood, 57th Regiment, æt. thirty; admitted 15th March, 1822. Labouring under acute inflammation of both eyes, accompanied with pain, sensation of sand in the eyes, great intolerance of light, and lachrymation, as well as a puriform secretion which was lodged between the inferior lids and eye-balls; the conjunctiva sclerotica extremely vascular; the vessels of a pinkish-red colour, and running at right angles from each other, forming the appearance of a fine network over the eye-ball. The conjunctiva slightly elevated around the cornea; which is, however, free from vascularity or opacity. The lids extremely vascular, and slightly villous. This attack came on five days ago, while on board the Chapman transport, and gradually increased to the present time.—Instillat. sol. argent. nitrat. gr. iv. ad aquæ ʒj.; bis in die amb. oculis. Low diet.

16th.—The pain and sensation of sand considerably abated, and the vascularity diminished. No appearance of chemosis this morning. Bowels rather confined.—Cont. ut antea. Low diet.

17th.—Vascularity diminishing rapidly; no appearance of puriform matter, and all sensation of sand or pain entirely subsided.—Cont. solutio. Low diet.

19th.—Vascularity of the eye-ball continues to decline fast; all lachrymation and intolerance of light have ceased; and, to use his own words, he feels the eyes stronger than they have been these two years back.—Cont. solutio. Half diet.

20th.—Vascularity of the eye-balls almost entirely subsided, as well as that of the lids, which have also lost all appearance of villosity. Bowels regular.—Cont. solutio. Half diet.

23d.—Discharged cured. Both eyes in a natural state.

CASE II.—Richard Moore, 36th Regiment, æt. 45; admitted 19th March, 1822. Was admitted last night, affected with acute ophthalmia of both eyes, attended with great pain, sensation of sand, intolerance of light, and a great discharge of thick, white, puriform matter; the conjunctiva sclerotica so very vascular, that scarcely a white spot could be discovered, and some degree of chemosis around the cornea; the lids slightly villous, and very vascular. The inflammation is merely local, and there is no general excitement of the system. Instillat. solutio arg. nit. gr. iv. ad aquæ ʒj. Low diet.

21st.—Pain in the eyes has entirely subsided; the vascularity diminished,

and the chemois subsided. Complains of only a slight sensation of sand.—Cont. ut antea. Low diet.

23d.—Feels the eyes free from pain or sensation of sand; intolerance of light and lachrymation considerably diminished, as also the puriform discharge and vascularity of the conjunctiva.—Cont. solutio. Half Diet.

27th.—Intolerance of light and lachrymation entirely subsided, and vascularity diminishing daily; bowels regular.—Cont. sol. Half diet.

30th.—Has no complaints now, except some slight vascularity of the conjunctiva, and a little puriform discharge.—Cont. sol. Half diet.

April 3d.—Has no puriform discharge, and the vascularity has subsided.—Cont. solutio. Half diet.

7th.—Discharged cured.

Cases of Chronic Ophthalmia.—William Jenkins, 47th Regiment, at. 30; admitted 9th June, 1822, labouring under great opacity and vascularity of the cornea of both eyes, and highly granulated lids; vision so much impaired, that he cannot walk without the assistance of a stick, or some one to guide him; complains of a dull pain in the eyes, and intolerance of light, which obliges him to wear a green shade. This complaint first attacked him on the 1st of last month, during his voyage from Bombay, by a violent pain in the eyes, which was soon followed by a profuse discharge of puriform matter. He was treated by venesection *ad deliquium*, twice repeated; blisters to the forehead, temples, and neck, and Goulard lotion. He states, that he received no benefit from the bleedings; that the pain continued unabated, until the blisters were applied about ten or twelve days after the attack. Never had sore eyes before.—Instillatur solutio argent. nitrat. gr. iv. ad aquæ. ʒj. bis in die. Half diet.

12th.—The solution agrees very well with his eyes: it produces a sensation of roughness, and a smarting pain, for about fifteen or twenty minutes after it is dropped in; which then subsides, and he feels the eyes more comfortable.—Cont. ut antea. Half diet.

20th.—Vascularity of the cornea diminished, and his vision improved.—Cont. solutio. Half diet.

July 2d.—The vascularity of the eye-balls and cornea considerably abated, and his vision so much improved, that he can now see to walk about with ease.—Cont. solutio. Half diet.

15th.—Granulations of the lids diminished, as also the vascularity and opacity of the cornea.—Cont. solutio. Half diet.

August 1st.—The granulations of the lids continue gradually to subside, as also the opacity and vascularity of the cornea.—Cont. ut antea. Half diet.

15th.—Cornea of right eye nearly transparent, and free from red vessels; that of the left still opaque, especially at the superior part.—Cont. solutio. Half diet.

25th.—The granulations continue to diminish, and become less vascular; the cornea are also improving.—Cont. solutio. Half diet.

September 5th.—The granulations are nearly removed; the right cornea is almost clear, and the left gradually becomes more so.—Cont. solutio. Half diet.

14th.—Cornea of right eye quite transparent. There is still some opacity at the superior margin of the left cornea, but it does not interfere with the axis of vision; lids nearly smooth.—Cont. solutio.

24th.—Discharged: vision perfect; both eyes natural.

Benjamin Callow, 81st Regiment, at. 45; admitted 24th April, 1822, affected with opacity and vascularity of the cornea of both eyes, and great villosity and vascularity of the lids; the right eye considerably more diseased than the left, and he cannot see any object distinctly with it; suffers little or no pain, but has some intolerance of light, and lachrymation. These complaints are the sequelæ of an acute ophthalmia, with which he

was attacked twelve months back, at Cork; which was treated by general and local blood-letting, purgatives, blisters, &c.—Instillat. solutio argent. nitrat. gr. iv. ad aquæ 3j. bis in die. Half diet.

27th.—Vascularity of the eyelids diminished, as also the intolerance of light and lachrymation. Bowels regular.—Cont. ut antea. Half diet.

May 3d.—Intolerance of light and lachrymation nearly ceased, and the vascularity is much diminished.—Cont. solutio. Half diet.

10th.—The villosity of the lids continues to subside gradually, and the eyes to recover their natural appearance.—Cont. ut antea. Half diet.

20th.—Vascularity and opacity of both cornea diminishing, and also the villosity of the lids.—Cont. solutio. Half diet.

June 7th.—Left cornea free from vascularity, and nearly so from opacity; right improving.—Cont. solutio. Half diet.

10th.—Vascularity of right cornea nearly subsided, and the opacity also, except in one small spot, which appears to be a small cicatrix; lids nearly smooth.—Cont. solutio. Half diet.

23d.—Discharged. The lids of both eyes perfectly healthy; left eye natural, vision perfect; right eye the same, except a small cicatrix, which is situated opposite the outer margin of the pupil, and renders vision in that direction indistinct.

Charles Alefounder, 3d Foot, æt. 26; admitted 26th July, 1822, labouring under granular lids, with opaque and vascular cornea, attended with puriform discharge and intolerance of light: the latter symptom is very troublesome, and is the only uneasiness he experiences, as he suffers no pain. He states that this complaint commenced last December, with acute pain in both eyes; and that he has been ever since in his regimental hospital, under treatment, where he was bled, cupped, leeches, blistered, had a seton placed in his neck, and used a variety of drops and bluestone.—Instillat. solutio argent. nitrat. gr. iv. ad aquæ 3j. bis in die, amb. oculis.

30th.—The drops have agreed very well with the eyes: they feel a little rough and painful after they have been applied, but the eyes are more comfortable afterwards. Bowels regular.—Cont. solutio. Half diet.

August 17th.—Vascularity of eyeballs and lids much abated, as well as the accompanying symptoms.—Cont. solutio. Half diet.

September 19th.—Discharged; both eyes quite well.

[From the *London Medical and Physical Journal*.

12. *Cesarean Operation*. By Dr. OESTERLEIN, of Oehringen*.—Although unsuccessful in its result, the relation of this case presents so many points of interest, that we are gratified in the opportunity of presenting it to our readers.

"Elizabeth Moekistin, of Pfdelbach, in Oehringen, unmarried, aged 28, had been rickety from childhood, the skeleton not only being hindered in growth, but rendered diseased and distorted. She might fairly be considered as a half Cretin, not only from her deformity, but from her intellectual deficiency. Excepting an asthmatic cough, however, she was in tolerable health. According to her account, she was forcibly impregnated by an unknown person in the evening, in April 1820; neither she nor any one else were aware of the existence of pregnancy, and, after working one day as a spinner for some neighbouring villagers, she returned to her mother, a poor widow, on the 24th November, as she felt some commencing pains. These continued slightly until the night of the 29th, when true labour pains began, and became very forcible, but were considered by the midwife as merely spasmodic, because the waters had not escaped, and because she was unable to discover the os uteri. Notwithstanding, she desired the assistance of a professor, seeing that the deformity of the patient was such as to render delivery impossible: to this, howe-

* *Graefe und Walther's Journal*, B. 4ter. 1 ste. Heft.

ver, the patient and her mother would not consent. About eleven, on the night of November 30th, the water escaped; the pains continued through the night, until ten in the morning of December 1st: as the head remained unmoved, and as the patient and her pains became weaker, the mother consented to my being called. I arrived at half past one, *p. m.* The patient was sitting in bed, had cough and difficult breathing, but was otherwise well. The pulse was feverish, but she had an appetite, and no particular thirst. The pains had ceased since ten o'clock. By examination, I discovered the following circumstances:—

“1st, The patient's height was four feet one inch. 2d, The chest and the vertebral column, so far as the neck and back, were well formed, but the latter in the two last vertebræ was bent considerably to the right side, and projected inwards. 3d, The lumbar vertebræ with the sacrum were pressed forwards and over to the right side. 4th, The posterior part of the sacrum presented, not a convexity, but a pointed projection. 5th, The bones of the hips and the trochanters were tolerably distant. 6th, The convexity of the ossa pubis was turned inwards towards the cavity of the pelvis, instead of outwards: this was particularly the case on the right side. 7th, The promontory of the sacrum was not in the middle, but projecting into the lower part of the pelvis on the right side, and easily to be felt with the finger. 8th, The whole of the lower part of the pelvis was so distorted and compressed, that the deformity could be easily ascertained by the introduction of the hand. When the middle finger was placed on the promontory, the point of the fore finger reached easily to the ramus of the right os pubis, and this distance was at most an inch and a half; on the left side it was about an inch more. The conjugate diameter from the middle of the promontory to the symphysis pubis was scarce two inches, and that in an oblique direction, from the displacement of the sacrum.—9th, The distance from the promontory to the points of the coccyx was scarce three inches. 10th, The external parts and vagina were in a natural state. 11th, The os uteri was tolerably dilated. The head lay above the brim of the pelvis immoveable, and not tumefied. The sagittal suture lay across the pelvis, but it was not possible to ascertain the situation of the face. 12th, The uterus could be felt high in the upper part of the abdomen, and almost wholly on the left side. The space between the umbilicus and pubis appeared empty. The abdomen and uterus were painful to the touch.”

Dr. Oesterlein judged the Cæsarean operation the only means of effecting delivery, and having proposed it to the patient and her friends, was surprised to meet an immediate assent. He concluded that they had some previous knowledge on the subject, and was afterwards confirmed in his suspicions by finding an old book of midwifery in the house, containing a plate with a representation of the operation. He fixed the operation for the following morning at nine, and in the interval requested the assistance of Drs. Lang and Ott: they both coincided in opinion with him: the conjugate diameter was estimated by the latter at one and one-half inch; by the former at nearly two inches; the distance from one ischium to the other was fixed by both at two inches.

“At three, *a. m.* of Saturday, December 2d, I was informed that the patient complained of violent pains in the belly and limbs; that there were alternate rigours and flushings; and that she could not be kept in bed.—She earnestly wished for the operation, and I was desired to hasten as much as possible. On my arrival at seven, *a. m.* the fever had ceased, but the patient suffered much from cough, difficulty of breathing, and pains in the abdomen. The pulse was quick and small; the situation of the head as before; and some blood had escaped from the vagina. Little as was to be expected in these circumstances, I undertook the operation, as being the only

means of relief; as the patient and her friends made no objections; and as she assured me that she felt the motion of the child.

"I commenced the incision two inches above, and two inches to the left side of the navel, cutting through the skin and muscles at once, and ending four inches below the navel in the linea alba. The peritoneum was thus exposed in some places, and I opened it cautiously in the middle of the incision, when a tolerable quantity of serum escaped. I introduced my finger into the opening, and enlarged it upwards and downwards. The uterus now presented itself, of a pale red colour; I cut obliquely through it for about an inch at its upper part, and thereby exposed the placenta: I introduced my finger into the opening in the uterus, and enlarged it to the extent of five inches. The placenta lay on the anterior surface of the uterus, from which it was almost wholly detached, but without any bleeding having taken place. I pushed it to one side, and seeing the breech of the child, seized the feet and delivered it easily excepting the head; this would not pass, and to allow its extrication I was obliged to enlarge the wound about an inch. The intestines now pressed from all sides through the wound, and could scarcely be retained by the hands smeared with oil. Without dividing the funis, I separated the remaining attachments of the placenta, removed a few coagula from the uterus, and pressed the gaping edges of the wound in it together with both hands. I then approximated the edges of the wound in the abdomen, carefully reduced the protruding intestines, and made three sutures. The interspaces were brought together with long adhesive plasters; pledgets dipped in oil were laid over the wound, and the whole retained with a bandage. During the whole operation, which with the dressing lasted fourteen minutes, it was not necessary to tie any vessels, and scarce half a cupful of blood escaped, not even during the division of the uterus.

"The patient bore the operation without complaint; the child was dead, and the cuticle in some places separated, a sufficient proof that it had ceased to live for some time.

"Immediately after the operation the patient was seized with a fit of vomiting and coughing, so forcible, that if a number of hands had not been applied to the abdomen, the sutures would infallibly have been torn out. She complained of constriction of the chest, shivering and cold sweats; the pulse was small, quick, and tremulous. These symptoms ceased after a dose of laudanum. c. liq. c. c. succinat; but only for a short time: in two hours she became delirious, the tightness of the chest, restlessness and debility increased, and at three, *p. m.*, about six hours after the operation, the patient died.

"Permission was with extreme difficulty granted by the mother to make an examination on the following day, but on the express condition that it should be confined to the abdomen, she being herself present all the time.

"*Dissection.*—The following were the appearances: the length of the external wound was about eight inches; all the viscera, the uterus excepted, appeared sound, and the intestines had regained their natural situation; the uterus was of a pale red colour, the edges of the wound in it were in the middle one and one half inch asunder; it contained a little coagulated blood; its inner surface was in a gangrenous state, but its substance was thick and firm; the incision in the uterus was nearly seven inches long, and ended an inch and a half from the insertion of the vagina; the insertion of the Fallopian tube was on the left side two inches distant from the wound, on the right side but one; in the pelvis were found about three ounces of bloody fluid. When the soft parts were as much as possible separate from the bones, the great deformity of the latter was more distinctly seen, and was such as scarcely to admit of description: they were compressed and thrust together from before and behind; the lumbar vertebrae, together with the sacrum, were thrust forwards, and projected far into the

upper aperture of the pelvis; the sacrum was unusually curved, and, instead of presenting a flat excavation inwards, formed an acute angle. The ossa pubis were soft, cartilaginous, and united by ligaments; the os coccygis was immoveable. The great diameter of the upper aperture of the pelvis was four inches nine lines; the small was two inches three lines, not reckoned, however, from the promontory of the sacrum, which was depressed and turned to the right side, but from the fourth and fifth lumbar vertebra. The distance of the ramus of the right os pubis from the promontory was one inch two lines; of that of the left from the same point, one inch nine lines; from the right sacro-iliac symphysis to the left ramus of the os pubis, four inches two lines; the same diameter on the opposite side, three inches five lines; the greater diameter of the lower aperture of the pelvis, two inches five lines; the lesser diameter, two inches seven lines; the height of the sacrum with the os coccygis, two inches eleven lines; the hollow of the sacrum, one inch four lines; the distance of the spinous processes of the ossa, two inches four lines."

The clear and candid manner in which the above case is related, deserves every commendation, and reflects much credit on Dr. Oesterlein. At the same time it is impossible to avoid remarking, that an unnecessary and prejudicial length of time was allowed to elapse between the determination on the propriety of the operation, and the period at which it was executed, particularly if the previous duration of labour be taken into consideration. Dr. Oesterlein saw her at half past one, *p. m.* of December 1st, and then judged the operation the only means of relief; it was not performed until nine, *a. m.* of the next day, a period of nearly twenty-four hours; and for this unjustifiable, and possibly fatal, procrastination, no reason of any kind is assigned.—*Anders. Quarterly Journal, for Oct.*

13. *Extirpation of the Cervix Uteri.*—The operation was performed by the removal of a cancerous induration, attended with pain, frequent bleeding, ichorous discharge, and hectic fever. The vaginal posture of the uterus was converted into an uneven, but well-defined tumour, three inches in diameter, as hard as ivory, and bleeding on the least touch. In the operation, Professor Graefe employed scissors, with long handles, curved on their flat surface, and having rounded points. By means of many small incisions with this instrument, the neck of the uterus was separated in every point from the body, and extracted. A common sponge, soaked in cold water, sufficed to stop the bleeding. On the third day considerable inflammation ensued, extending from the uterus to the bladder and rectum, but was reduced by bleeding, and calomel combined with laurel-water. The discharges diminished from the twelfth day, and had ceased in the fourth week. Some time after the operation, repeated examination proved that the disease had not returned, and that the vagina and cavity of the uterus formed one uninterrupted surface. In the fifth week, the patient (who was aged 54) left the institution. She was seen again at the end of two months, had not had any return of fever, pain, or discharge, and was in every respect perfectly well.—*Anders. Quarterly Journal for Oct.*

14. *Effect of Castration in certain Animals.*—M. FANEAU DELACOUR, of Souzay, has performed a number of experiments upon sheep and pullets, with a view of determining the effect of castration upon the animal economy, conceiving that the loss of organs so important as the testicles, could not take place without materially affecting the health; which opinion was strengthened by considering the sudden evils often arising from more trifling causes,—such as the disappearance of eruptions, or the drying up of a long-established ulcer.

M. Delacour had eighty pullets castrated in his presence: eleven of these immediately exhibited well-marked signs of cerebral affection, and in three others the symptoms were observable, but not to so great a degree. Of eight which became mad, four of the worst, as well as two out

of three which were threatened with apoplexy, were cupped upon the rump, and an actual cautery applied on each side of the cupping-glass; and, in the four first instances, a cautery was also applied on the head. All these recovered: whereas, one left entirely to the efforts of nature, died on the third day, the brain exhibiting the strongest marks of inflammation.

The same phenomena were observable among a flock of sheep, and in a greater proportion. The same remedies were made use of in seven of these animals, and they all recovered on the day the cauteries were made: whereas, two, left entirely to nature, died,—one on the fourth day, with all the marks of madness; the other, on the second day, in a state of coma. The examination of the heads showed, in the first instance, a violent state of inflammation of the brain and its membranes: the brain of the second was softened, and the ventricles filled with a fluid resembling the white of an egg a little coloured.—(*Journal Universel des Sciences Medicales*, Juin.)

15. *Cure of external Hydrocephalus by Puncture.*—Dr. FENOGGIO relates the case of a child, eighteen months old, who fell from a balcony fifteen feet from the ground: the left parietal bone was depressed, but there was no fracture, and not a drop of blood escaped from the nostrils; the left humerus, and the bones of the fore-arm, were fractured. The parietal bone resumed its usual form in a few hours. On the day following the accident, violent fever came on: the breathing was stertorous, and the skin was burning hot; the lower extremities were cold, and there was a trembling motion of the right hand. Bleeding by leeches was resorted to, and ice applied to the head; and the fever was relieved. At the end of the fourth day, however, a fluctuating tumour was perceived at the posterior fontanelle, and which, being pressed upon, disappeared, but returned when the pressure was removed. In proportion as this tumour increased externally, the child became more lively; but, as Fenoglio justly saw the danger which threatened, in consultation with Dr. Giordano and Professor Rossi, it was determined to wait some time before any attempt was made to remove the swelling, considering it to be the product of extravasation only. After the seventh day, however, they changed their opinion as to its nature, and a small puncture was made at its most depending part, and a corrupted and fœtid lymph was evacuated. The infant immediately fell asleep, and slept for eight hours; but awoke at the end of that time with renewed fever, and the symptoms previously described. Leeches were applied to the left foot, an opening medicine administered, and a strong infusion of digitalis ordered. (*Neither the strength nor doses of this infusion are mentioned.*) In the evening, the fever was diminished. The opening into the tumour was not closed, and a fluid escaped from it drop by drop, but so slowly, that it was only known by the moisture of the pillow.

The intellectual and physical faculties of the child improved rapidly; the bowels acted freely; and this amendment went on from day to day, so that the parents conceived her free from danger. At the end of the second week, however, on a sudden, the tumour ceased to discharge; there was suppression both of fœcal evacuations as well as of the urine, and the former symptoms again recurred. Leeches were again applied to the ankles, castor oil given so as to purge, and the digitalis again had recourse to, with so good effect, that in about eleven days the hydrocephalus had entirely disappeared.

Another severe attack was experienced after this, preceded by vomiting, and accompanied with convulsions of the whole body, but which were relieved by the same means; and the patient got well.—(*Journal Universel*, Mai.)

16. *On the Preservation of Subjects for the purpose of Dissection.* By J. AMESBURY, Esq., Member of the Royal College of Surgeons, &c.—Mr. Amesbury has informed us, in a letter which we have lately received from him, that he has derived great advantage, in his attempts to preserve sub-

jects for the purpose of dissection, by using a mixture of the nitrate of potass and muriate of soda, in the proportion of about one-fourth of the nitrate to three-fourths of the muriate. In the winter season he has preserved subjects so well by the use of these salts, that at the expiration of six months he has found them in nearly as good a state for dissection as when they first came into his possession.

He uses one pound of the mixed salts in preserving about fifteen pounds of the subject.* His method is to rub the salts upon the integuments at three or four times, at intervals of two days; and to throw a handful into the chest and abdomen, if he wishes to preserve the viscera more effectually than can be done by rubbing the salts upon the surface of the body. He has found, that if the fingers and toes are left exposed to the action of the air, they get too dry for dissection after a few weeks; this is also the case, sometimes, in other parts when the cuticle is abraded. This evil he obviates by wrapping the parts in a cloth kept wet with a solution of the salts in water.

He recommends those who may desire to try this plan to employ the antiseptic as early as possible after they are in possession of the subject, which they may wish to preserve; for the salts will not stop the putrefactive process when it has once begun, though they will check it in a very material degree.

In the summer it is better (according to Mr. A.) to throw the parts into a strong solution of the salts, after they are well impregnated with them, by rubbing; for at this time evaporation goes on so rapidly, that the whole soon becomes dry and unfit for dissection; and this cannot easily be prevented, unless the wet cloths are very frequently renewed.

The integuments dissected back should be preserved, and laid over the imperfectly dissected parts, when the subject is left for several hours; and, if the pupil wishes to preserve moist the parts which he has dissected for some time, in order to refresh his memory, he cannot do better than wrap them in their natural covering. The bones of subjects which have been impregnated with the salts, macerate quite as well as if the salts had not been employed, provided that the water be changed two or three times at an early period of the macerating process.

Mr. A. states that he has found this mode of preserving subjects *far* preferable to any other with which he is acquainted; and that he has strong reason to believe that the action of the salts prevents the generation or destroys the activity of that principle in them, which is so frequently found to be productive of troublesome sores in those who happen to prick or cut their fingers with a hook or knife, covered with the fluids of the body, while they are dissecting. The effects of these apparently slight injuries are often alarming, and sometimes even fatal.

We flatter ourselves that, at this season of the year, the above observations will not be uninteresting, at least to the junior part of our readers; and we should be glad to find, at our next visit to the public dissecting-rooms, a decided improvement in the appearance of the subjects, as we have usually seen them; and hope to breathe a less deleterious air than that which is strongly impregnated with the effluvia which emanate from putrifying animal matter.—*From the Lond. Med. Repos. for Oct.*

* From this the quantity necessary to preserve a whole subject may be easily calculated with a sufficient degree of precision.

MEDICAL INTELLIGENCE.

THE register of the weather, from which the following tables have been calculated, was kept by Dr. Robert Wilson, Sen., whose great attention and accuracy in regularly noting down, at stated periods of the day,* the different indications of the thermometer, and state of the atmosphere, for upwards of twenty years, in the city of Charleston, South Carolina, affords, to the meteorologist, satisfactory data to judge of the temperature of this climate.

Charleston is situated at the confluence of the Ashley and Cooper rivers, in north latitude $32^{\circ} 45'$, and west longitude, from Greenwich, $79^{\circ} 57'$; these rivers unite and flow into the sea about six miles below the city; and the general face of the country, extending from the sea coast about a hundred miles into the interior, presents almost a level plain, through which the rivers flow with a gentle current to the ocean.

There appears to have been no regular statement kept of the weather in Charleston before the year 1792.

From 1750 to 1759 (a period of nine years), we have, in Dr. Chalmers' work on the weather and diseases of South Carolina, which was published in 1776, a table of mediums of Fahrenheit's thermometer; from which I have given an abstract of the annual mean temperature, and fall of rain.

It would appear that there was no material change in regard to the mean annual temperature of the nine years, commencing from 1750, and the twenty years in my tables, commencing from 1792; the former being $66^{\circ} 3'$, and the latter $66^{\circ} 5'$; but from 1802 to 1811, the mean annual temperature was $67^{\circ} 5'$; hence the difference is 2° .

There is, however, a greater difference in the annual falls of rain. From 1750 to 1759, the mean was 41.75 inches, and from 1794 to 1811, the mean was 51.2 inches, which gives an increase of 10.5 inches.

The coldest month in Carolina is January, the mean temperature of which is $50^{\circ} 7'$; and the warmest July, the mean heat being $81^{\circ} 2'$; the difference between the latter and August is but 5-10ths, or one half of a degree.

JOHN WILSON,

Charleston, April 24, 1824.

CHALMERS.

Years.	Mean Annual Temperature.	Highest.	Lowest.	Annual fall of Rain.
1750	65°	96°	25°	53.50
1751	67	94	23	54.43
1752	67	101	18	46.49
1753	67	91	28	40.93
1754	68	93	22	37.06
1755	65	90	27	44.14
1756	67	96	26	33.76
1757	66	90	25	40.17
1758	64	94	25	31.95
1759	67	93	27	34.51

* The periods were 8, a. m.; 3 p. m.; and 10 p. m.,

1792. Months.	3 Observations Mean heat Fahrenheit.*	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer highest.	Hygrometer lowest.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches & tenths
May,	74° 8'	84°	65°					15	16	
June,	76 8	89	63					14	16	
July,	81 6	93	74					14	17	
August,	80 7	92	69					13	18	
September,	73 5	85	60					4	26	
October,	66	77	46					6	25	
November,	59 9	74	45					19	11	
December,	50 4	70	34					20	11	
	66	mean of year.						105	140	

REMARKS.—*May*, Six days rain; three thunder storms; wind fresh four days.—*June*, Three thunder storms; winds fresh three days.—*July*, Six days mean heat was 86° 7'.—*August*, Seven days rain; four thunder storms.—*September*, Four days winds fresh.—*October*, Night of the 31st a heavy gale of wind.—*November*, Fine weather in this month.

1793. Months.	3 Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer highest.	Hygrometer lowest.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches & tenths.
January,	51° 7'	67°	36°					23	8	
February,	56 2	74	35					14	14	
March,	59 8	72	34					20	11	
April,	67 7	83	56					14	16	
May,	73 3	83	62					9	22	
June,	79 8	86	70					23	7	
July,	82 1	88	76					19	12	
August,	80 3	87	70					15	16	
September,	76 7	89	69					9	21	
October,	64 5	82	35					5	26	
November,	57 7	76	40					17	13	
December,	48 6	66	31					21	10	
	66	5 mean of year.						189	176	

REMARKS.—*January*, Seven days rain; thunder and lightning on the 30th.—*February*, Four heavy gales in this month.—*March*, Winds fresh six days; six days rain.—*April*, Thunder and lightning four days; rain six days.—*May*, Rain 10 days; weather variable.—*June*, Rain five days; six thunder storms.—*July*, Five thunder storms.—*August*, Seven thunder storms; rain eight days.—*September*, Rain six days.—*October*, On the 28th snow storm from N. E.; on the 17th, thermometer at 48°; on the 29th, it was 35°.—*November*, Rain six days; weather variable.—*December*, One thunder storm; three heavy gales.

*—The thermometer was placed in a passage way, the door to the East and window on the stair-case to the West.

1794. Months.	3 Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer highest.	Hygrometer lowest.	No. of Days West winds.	No. of Days East winds.	Fall of Rain, inches&tenths.
January,	50° 3'	65°	35					17	14	
February,	51 7	70	29					20	8	
March,	61 6	76	43					14	17	
April,	64 1	74	50					12	18	
May,	74 7	86	63					15	16	
June,	77 1	91	65					16	14	
July,	78 7	85	72					18	13	
August,	80 6	91	75					12	19	
September,	79 2	88	66					13	17	
October,	62 2	75	47					7	24	
November,	57 1	74	37					12	18	
December,	52 5	64	37					14	17	
	65	8	mean of year.					170	195	

REMARKS.—*January*, Rain six days; one thunder storm.—*February*, Rain five days; two heavy gales.—*March*, Four thunder storms; winds fresh three days.—*April*, Weather moderate.—*May*, Two thunder storms.—*June*, Thirteen rains; ten thunder storms.—*July*, Fifteen rains; three thunder storms; five clear days.—*August*, Rain five days.—*September*, Rain three days.—*October*, Rain three days.—*November*, Rain five days; heavy storm from E. one day.

1795. Months.	3 Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer highest.	Hygrometer lowest.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches&tenths.
January,	48° 0'	60°	33°					9	22	8.5
February,	38 8	62	29					17	11	1.8
March,	55 1	73	33					18	13	4.6
April,	66 0	78	53					16	14	3.5
May,	73 8	84	71					11	20	8.1
June,	77 7	86	71					14	16	8.2
July,	81 1	92	74					19	12	5.3
August,	79 1	88	72					12	19	13.6
September,	75 0	83	59					8	22	8.9
October,	65 0	78	48					8	23	5.8
November,	61 4	75	42					13	17	0.9
December,	53 6	71	39					20	11	5.0
	64	5	mean of year.							74.2

REMARKS.—*March*, Winds fresh four days; three thunder storms.—*May*, Three days rain.—*June*, Six thunder storms.—*July*, Two thunder storms.—*August*, Three days winds blow hard.—*September*, Wind blowing hard one day.—*December*, Hard winds two days.

1796. Months.	3 Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer highest.	Hygrometer lowest.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches & tenths.
January,	54° 2'	68	31					19	12	4.3
February,	54 5	72	32					16	13	2.6
March,	56 9	74	33					12	19	5.9
April,	66 4	77	50					20	10	3.6
May,	71 6	84	57					22	9	2.0
June,	79 3	88	74					21	9	11.6
July,	81 0	89	75					20	11	8.1
August,	78 5	89	71					11	20	6.1
September,	74 0	83	60					10	20	8.7
October,	65 0	78	54					1	30	2.0
November,	55 9	74	27					9	21	1.6
December,	44 4	66	17					28	3	1.6
	65	1 mean of year.								58.1

REMARKS.—*February*, Winds hard three days.—*April*, Winds fresh; five thunder storms, with hail.—*May*, Two thunder storms.—*June*, Nine thunder storms.—*August*, Three thunder storms.—*September*, Four thunder storms.—*October*, Winds hard six days.—*November*, From 25th, weather unusually cold.—*December*, The thermometer stood at 13°, out of doors, one day, and at 17°, in doors, two days.

1797. Months.	3 Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer highest.	Hygrometer lowest.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches & tenths.
January,	48° 1'	66	22					15	16	2.8
February,	57 6	73	43					16	12	5.2
March,	62 5	76	42					17	14	5.0
April,	67 9	80	50					20	10	3.4
May,	75 5	88	62					20	11	2.7
June,	79 1	87	72					20	10	2.3
July,	80 7	87	75					26	5	9.2
August,	79 8	87	73					14	17	11.6
September,	72 6	88	59					7	23	4.6
October,	65 0	81	44					8	23	3.9
November,	57 3	76	40					15	15	2.5
December,	44 4	69	24					11	20	1.8
	65	8 mean of year.								55

REMARKS.—*March*, Hard winds three days.—*April*, Winds fresh four days.—*May*, Weather pleasant and clear.—*June*, Winds fresh four days.—*July*, Thunder on twenty-two days.—*October*, Winds fresh four days.

1798. Months.	3 Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer highest.	Hygrometer lowest.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches&tenths.
January,	50° 7'	63°	33°					13	17	1.8
February,	51 8	67	32					13	15	6.8
March,	58 6	73	42					20	11	1.8
April,	64 1	80	46					13	17	1.0
May,	71 5	85	58					7	24	5.7
June,	78 2	90	69					27	3	4.5
July,	78 9	88	70					19	12	9.8
August,	80 1	87	75					13	18	6.8
September,	73 2	83	50					7	23	2.5
October,	66 0	78	37					6	25	0.9
November,	54 1	71	38					7	23	0.0
December,	50 5	67	31					19	12	3.6
	64	8	mean of year.							45.2

REMARKS.—*January*, Winds hard three days.—*February*, Thunder two days.—*March*, Winds blowing hard seven days.—*April*, Winds blowing hard seven days.—*June*, Thunder nine days.—*July*, Thunder ten days.—*August*, Thunder four days.—*November*, No rain this month.

1799. Months.	3 Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer highest.	Hygrometer lowest.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches&tenths.
January,	52° 3'	68°	23°					13	18	0.9
February,	52 8	69	34					14	14	5.1
March,	53 5	68	37					20	11	6.1
April,	64 4	83	46					18	12	1.7
May,	70 9	85	57					16	15	1.5
June,	78 4	89	70					14	16	11.3
July,	79 9	91	73					23	8	7.1
August,	77 8	85	71					14	17	12.9
September,	76 7	85	65					14	16	12.7
October,	68 4	79	56					11	20	10.0
November,	56 4	71	30					17	13	1.0
December,	51 5	69	30					14	17	4.5
	65	2	mean of year.							75.4

REMARKS.—*February*, Thunder two days; winds blowing hard three days.—*April*, Shock of an earthquake on 11th.—*July*, Thunder eight days.—*August*, Thunder thirteen days.—*September*, Eight inches and five-tenths of rain fell on the 25th, and a heavy gale.—*October*, On the 19th and 20th, seven inches and three tenths of rain fell.—*November*, Weather pleasant; a heavy storm, with thunder, on the 7th.

1800. Months.	Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Baromete highest.	Barometer lowest.	Hygrometer highest.	Hygrometer lowest.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches&tenths.
January,	42° 6'	58°	28°					19	12	11.5
February,	44 5	66	32					15	13	2.7
March,	54 5	71	38					17	14	7.8
April,	67 0	78	53					19	11	2.2
May,	74 1	87	57					19	12	1.9
June,	78 6	87	70					24	6	5.5
July,	80 0	89	71					17	14	3.4
August,	82 1	89	76					14	17	2.1
September,	73 4	87	67					5	25	1.6
October,	66 5	78	48					10	21	7.5
November,	55 8	72	33					12	18	2.9
December,	51 7	68	28					16	15	4.3
	64	2	mean of year.							51.6

REMARKS.—*January*, Three falls of snow, one of eight inches.—*February*, Two snow storms.—*March*, Winds hard two days.—*May*, Thunder seven days.—*June*, On the 18th yellow fever appeared.—*July*, Thunder five days.—*August*, Thunder six days.—*September*, Thunder three days.—*October*, Heavy gale on the 4th.—*November*, Thunder one day; heavy gale on the 12th.

1801. Months.	Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer dry.	Hygrometer damp.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches & tenths
January,	54° 0'	66°	30°	30.58	30.18	6	10.47	24	7	1.6
February,	58 1	73	36	30.63	30.12	4 to 57	9 to 69	11	17	1.7
March,	60 2	74	44	30.80	30.20	1 20	1 43	22	9	4.2
April,	64 8	79	46	30.90	30.10	2 3	3 70	13	17	7.4
May,	74 7	88	60	31.08	30.30	5 7	1 60	19	12	0.4
June,	78 5	90	64	30.70	30.35		4 55	17	13	1.3
July,	80 8	90	71	30.57	30.25		28 85	18	13	12.3
August,	81 8	89	73	30.51	30.21		20 84	22	9	6.0
September,	78 7	88	64	30.46	30.20		16 76	3	27	1.2
October,	68 8	81	54	30.56	30.15		7 85	6	25	2.4
November,	57 7	74	41	30.62	30.22		7 90	12	18	1.2
December,	52 9	68	36	30.48	30.08		15 76	24	7	3.2
	67	5	mean of year.							42.9

REMARKS.—*February*, Four thunder storms; one snow storm; one heavy gale.—*June*, Five thunder storms; on the 30th the thermometer at 1 P. M. stood at 90°, at 3 P. M. at 79°.—*July*, Six thunder storms.—*August*, Eleven thunder storms.—*December*, One thunder storm.

1802. Months.	Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer dry.	Hygrometer damp.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches&tenths.
January,	58° 0'	74°	45	30.77	30.12		11 to 75	17	14	0.4
February,	57 0	67	32	30.90	30.13		10 95	12	16	0.8
March,	60 5	74	44	30.80	30.20		4 62	19	12	0.8
April,	70 6	86	61	30.75	30.30	7 to 15	3 95	20	10	2.0
May,	73 2	84	64	30.73	30.40	1 12	2 30	24	7	3.0
June,	78 1	86	68	30.76	30.30	4	1 45	14	16	3.4
July,	79 9	87	70	30.40	30.15		30 101	19	12	12.1
August,	79 8	89	72	30.54	30.04		30 90	14	17	4.9
September,	77 4	89	60	30.50	30.10		14 100	17	13	5.9
October,	71 0	81	54	30.90	30.20		12 90	6	25	0.2
November,	59 7	74	45	30.50	30.10	1 3	13 17	13	17	2.4
December,	52 6	70	33	30.77	30.16		5 76	15	16	3.2
	68	1 mean of year.								39.1

REMARKS.—January, One heavy gale.—May, Hail fell on the 20th.—June, Thunder, with hail, on the 24th.—August, Thunder seven days.

1803. Months.	Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer dry.	Hygrometer damp.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches&tenths.
January,	50° 2'	69°	31°	30.64	30.12	7	1 to 75	24	7	0.4
February,	52 8	71	30	30.66	30.02		4 115	16	12	6.5
March,	58 9	74	37	30.67	30.10		9 82	15	16	2.2
April,	67 3	78	51	30.66	30.22	1 to 20	7 67	10	20	1.9
May,	72 0	86	58	30.77	30.10		1 115	16	15	3.2
June,	78 1	90	72	30.60	30.20	2 9	20 85	19	11	9.6
July,	81 3	90	69	30.50	30.20		10 62	20	11	9.5
August,	81 7	89	71	30.40	30.30		10 67	15	16	3.4
September,	76 8	88	66	30.40	30.10		15 135	5	25	7.5
October,	72 6	82	62	30.44	30.10		53 & 144	13	18	5.6
November,	59 4	69	47	30.54	30.01		17 to 82	9	21	4.0
December,	56 6	69	40	30.60	30.37	5	5 105	15	16	5.1
	67	3 mean of year.								58.9

REMARKS.—February, A heavy snow storm on the 15th.—June, Six thunder storms.—July, Eight thunder storms.

1804. Months.	3 Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer dry.	Hygrometer damp.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches&tenths.
January,	50°1	68°	34°	30.50	29.50		1 to 62	20	11	5.1
February,	54.9	69	41	30.55	30.13		1 103	12	17	1.9
March,	54.9	73	38	30.55	30.10	1 to 17	4 90	24	7	5.4
April,	65.9	82	47	30.64	30.10	1 26	3 75	25	5	4.4
May,	73.9	84	63	30.51	30.20		10 80	15	16	3.6
June,	80.9	91	73	30.50	30.10		1 65	18	12	6.5
July,	83.1	90	75	30.40	30.10		12 78	19	12	3.4
August,	82.9	91	77	30.40	30.20		24 81	7	24	3.9
September,	79.8	88	64	30.50	30.00		12 100	9	21	14.2
October,	69.2	86	53	30.60	30.10	8 14	3 53	10	21	1.8
November,	62.1	75	44	30.70	30.14		10 80	10	20	1.3
December,	48.7	74	34	30.60	30.00	10	2 66	16	15	1.9
67.1 mean of year.										54.3

REMARKS.—*March*, Winds fresh three days.—*April*, The latter part temperate and clear weather.—*June*, Eight thunder storms.—*August*, For three days the mean temperature was 87°.—*September*, Heavy and continued storm of wind from N. E. on the 7th and 8th; heavy gale from N. E. on the 23d.—*October*, Weather pleasant and temperate.

1805. Months.	3 Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer dry.	Hygrometer damp.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches&tenths.
January,	50°9	69°	27°	30.70	30.04		3 to 87	25	6	2.3
February,	54.1	69	26	30.56	30.16	1 to 11	1 55	21	7	3.2
March,	60.6	74	38	30.78	30.20	1 6	4 70	15	16	1.3
April,	67.8	79	55	30.99	30.30		2 101	22	8	3.1
May,	76.7	85	65	30.76	30.28	12	10 116	15	16	1.6
June,	79.5	88	71	30.64	30.20		59 105	14	16	4.2
July,	82.6	91	74	30.56	30.28		56 97	19	12	2.1
August,	82.9	91	77	30.50	30.30		74 100	18	13	3.1
September,	78.2	86	67	30.49	30.23		7 155	3	27	9.4
October,	64.8	81	44	30.66	30.04	1	3 80	14	17	2.6
November,	64.5	76	50	30.60	30.12		1 56	15	15	2.2
December,	61.1	73	45	30.80	30.20	7	15 44	15	16	1.2
68.6 mean of year.										37.3

REMARKS.—*January*, On the 22d, the thermometer, in doors, stood at 27°, out of doors, 16°.—*June*, Four thunder storms.

1806. Months.	3 Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer dry.	Hygrometer damp.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches & tenths
January,	52°5	70°	26°	30.65	30.10	1 to 5	1 to 53	20	11	0.9
February,	62.9	77	46	30.70	30.20	3	9	84	9	0.2
March,	59.7	75	42	30.68	30.32		23	96	13	0.7
April,	66.4	80	44	30.70	30.30		3	72	18	2.7
May,	74.0	86	63	30.70	30.22		14	67	15	3.2
June,	80.3	89	69	30.46	30.15		3	67	19	6.8
July,	81.9	92	74	30.60	30.25		4	46	19	5.1
August,	82.2	91	72	30.47	29.07		10	58	13	6.3
September,	78.9	84	72	30.50	30.10		2	66	6	4.9
October,	70.7	83	59	30.50	30.10	2	5	70	4	27
November,	61.3	72	44	30.50	30.10	1	6	68	18	12
December,	53.7	70	32	30.60	30.01	3	5	8	65	19
	68.6 mean of year.									43.7

REMARKS.—*July*, On the 20th, thermometer, in the sun, 131°.—*August*, On the 3d, at 6 P. M., thermometer 90°.—*September*, On 27th, heavy gale from West.—*October*, Heavy gale from N. E. on 8th, and S. E. on 9th.—*December*, Weather moderate and clear.

1807. Months.	3 Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer dry.	Hygrometer damp.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches & tenths.
January,	47°7	61°	30°	30.77	30.15	4 to 10	1 to 42	22	9	2.2
February,	52.9	67	24	30.50	30.00	6	7	98	14	7.3
March,	56.6	73	41	30.54	30.02		45	134	15	6.7
April,	65.6	79	46	30.61	30.20		30	87	21	9
May,	72.3	89	51	30.67	30.21		1	80	24	7
June,	79.4	91	69	30.63	30.22		49	109	14	16
July,	83.6	91	74	30.42	30.15		58	97	24	7
August,	81.9	89	72	30.56	30.10		56	100	13	18
September,	78.5	92½	61	30.50	30.25		51	96	13	17
October,	64.9	82	47	30.60	30.31		30	77	7	24
November,	56.9	75	39	30.60	30.20		36	97	22	8
December,	59.2	75	43	30.47	30.10		54	102	15	16
	68 mean of year.									204
										161
										42.2

REMARKS.—*January*, Weather moderate.—*February*, On the 7th, thermometer, in doors, 24°, out of doors, 16°; snow fell on the 4th.—*March*, One gale; two thunder storms.—*April*, One heavy gale.—*June*, Thunder three days.—*August*, Two heavy thunder storms; mean greatest heat of the first five days was 91°, thermometer being 90° to 92½°.—*October*, This month and one preceding very sickly, 328 deaths in September, and 225 in October.—*November*, 128 deaths.—*December*, 266 deaths. Mean fall of rain for 13 years, up to 1807, 52.1.

1808. Months.	3 Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer dry.	Hygrometer damp.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches&tenths.
January,	50°2	65°	26°	30.72	30.10		46 to 112	17	14	4.6
February,	59.0	78	41	30.64	29.42		30 120	20	9	2.3
March,	63.5	79	45	30.55	30.20		48 105	14	17	3.0
April,	66.4	76	50	30.55	30.10		44 110	19	11	4.5
May,	72.4	80	60	30.71	30.10		32 111	25	6	3.5
June,	80.9	91	70	30.74	30.20		38 95	14	16	3.0
July,	83.2	91	72	30.45	30.24		64 90	18	13	6.0
August,	81.1	88	69	30.45	30.16		62 98	9	22	2.4
September,	76.6	88	54	30.46	30.20		52 110	8	22	3.8
October,	66.3	84	52	30.54	30.09		58 130	6	25	3.1
November,	61.6	78	44	30.68	30.14		40 98	19	11	1.2
December,	55.8	73	39	30.65	30.00		58 108	15	16	3.4
	67	mean of year.						184	182	40.8

REMARKS.—January, 418 deaths.—February, 228.—March, 189 deaths.—April, 136 deaths.—May, 148 deaths.—June, 113 deaths.—September, Winds fresh six days.—December, One heavy gale; one thunder storm.

1809. Months.	3 Observations Mean heat Fahrenheit.	Thermometer highest.	Thermometer lowest.	Barometer highest.	Barometer lowest.	Hygrometer dry.	Hygrometer damp.	No. of Days West winds.	No. of Days East winds.	Fall of Rain inches&tenths.
January,										
February,										
March,										
April,										
May,										
June,										
July,										
August,										
September,										
October,										
November,										
December,										
	67.2	mean of year.								66

TABLE OF MEAN RESULTS.

Years of Observation.	1792	1793	1794	1795	1796	1797	1798	1799	1800	1801	1802	1803	1804	1805	1806	1807	1808	1809	1810	1811
Mean Greatest Heat. June, July, August, September. }	81.4	82.4	82	80.8	80.8	80.9	80.3	80.9	82.1	82.7	80.5	82	82.4	83.2	83	83.5	82.5	81.1	81.7	82.2
Mean Heat. June, July, August, September. }	79	79.7	78.9	78.2	78.2	77.9	77.6	78.2	78.5	79.9	78.8	79.4	81.7	80.8	80.8	80.8	80.5	78.1	78.8	79.3
Mean Annual Heat.	66	66.5	65.8	64.5	65	66.4	64.8	65.2	64.2	67.5	68.1	67.3	67.1	68.6	68.6	66.6	68	67	67.2	67
Fall of Rain. June, July, August, September. }				36	34.5	27.7	23.6	44	12.6	20.8	26.3	30.1	28	18.4	23	16.6	15.2	33.9	20.4	22.5
Annual Fall of Rain.				72.1	58.1	55	45.2	75.4	51.6	42.9	39.1	58.5	54.4	36.8	43.8	42.2	40.8	66	45.4	49.3

Results of Meteorological Observations taken on the western side of the Delaware, in Lat. 39° 37'.

1824. *September.*—Mean temperature at sunrise, - - - 61°7
do. at the warmest part of the afternoon, 70.9
do. at sunset, - - - 67.4
do. of the month, - - - 66.5

Five days at and above 80°; highest 81°, on the 6th, 15th, and 16th; lowest 46°, on the 24th, attended by a slight frost on the low grounds.—Quantity of rain, 4.81 inches; thunder, one day, the 16th.—Prevailing winds, the first half the month, between North and East, with much rain; the latter half, between North and West, with cool dry weather.

October.—Mean temperature at sunrise, - - - 50°8
do. at the warmest part of the afternoon, 63.4
do. at sunset, - - - 58.4
do. of the month, - - - 57.5

Highest on the 10th, 74°; lowest on the 31st, 34°.—Quantity of rain, 1.40 inches.—Prevailing winds from South West to North West. The first general white frost fell on the morning of the 8th.

November.—Mean temperature at sunrise, - - - 38°6
do. at the warmest part of the afternoon, 54
do. at sunset, - - - 47.6
do. of the month, - - - 46.7

Highest on the 24th, 61°; lowest on the 28th, 4th, and 20th.—Rain on six days; thunder, and at times showers of hail, on the 5th.

December.—Mean temperature at sunrise, - - - 35°1
do. at the warmest part of the afternoon, 46.2
do. at sunset, - - - 43
do. of the month, - - - 41.4

Highest on the 18th, 70°; lowest on the 5th, 24°.—Rain on six days.—Prevailing winds South to South West, and West to North West.

This month has been remarkably mild. Ponds of still water, of even a few yards in circumference, have been seldom covered with ice, and not at any time strong enough to bear a man. Snow has fallen but once, and not sufficient then to cover the ground. The elevation of the thermometer, as on the 18th, to 70°, is very rare, perhaps unexampled for December, in our latitude.

The mean temperature of the year 1824, as deduced from the observations communicated to this Journal, is 55°.4.

The bill for regulating the practice of medicine in Pennsylvania has not succeeded. As it will soon be reconsidered by the legislature, the following remarks are respectfully submitted to those who are interested.

As the object of medicine is the preservation of human life, too much pains cannot be taken to improve it, and prevent its abuses. The difficulty of its acquisition should be considered by a community, careful of the lives of its citizens.

Its present improved state is the result of the labour of two thousand years. It requires a long preparatory study; and, after entering upon it, the number of sciences, strictly medical, is considerable. The human body consists of many different parts, each of which have their diseases. These again are united into organs, which, from their difference of function, require a different treatment: of the skin alone, upwards of eighty varieties of diseases have been enumerated. These organs united form the system, which, when affected as a whole, must be treated by peculiar plans. Our

diseases are therefore numerous. Their remedies are also many, and their application requires great discrimination; for they must be varied according to the sex, age, climate, mode of life, &c. This again increases the difficulties of the profession, and renders it necessary that every excitement, facility, and patronage should be held out to its followers by the state, in order to render them as skilful as possible.

The character of the science furnishes additional reasons. Pain, misery, and contagion, are obstacles to its acquirement; and the dangers from epidemics deter from its practice. The wounds accidentally received in dissection destroy life, and typhus fever not unfrequently is the result of the exhalations attendant on the same pursuit.

Thus difficult and dangerous, and important to the state, the profession of medicine should at least yield a comfortable support; this is often prevented by quackery, and other abuses, to which it is subject.

The character of the quack is the same in every country. These persons have been generally so worthless as to be unable to gain a subsistence by any trade or profession, or have been degraded by their vices. Aware of the credulity of the people upon this subject, they suddenly, and without previous study, assume the profession of medicine. To render their arts more successful, they pretend to supernatural talents, conferred by God exclusively upon themselves. They profess to cure all diseases, many of which the experience and talents of two thousand years have proved to be incurable, and often only by one remedy, though it be well known that the changing aspects of disease are only to be met successfully by a properly varied treatment, composed of many remedies. Their drugs are often of the most active kind: it excites horror, when the freedom with which they use them is contemplated. This course of crime is supported by many minor vices; deception, effrontery, and the robbery of their victims, who, fascinated by the relation of pretended cures, often borrow money to buy their remedies, and are finally left in extreme want and misery, a prey to confirmed maladies, which, by proper means, might have been relieved. From the attack of the robber, defence, release, or escape are possible: from the quack who gains the confidence of the people, death is too frequently the only refuge.*

In Europe, it is observed that villages are in general more healthy than cities. During an epidemic, owing to the quacks in the smaller towns, there is a greatly increased mortality.† In this changeable climate, inflammatory diseases prevail, which often become fatal by heating nostrums, and the delay of active treatment. I have heard of death being suddenly produced by a quack, by the extirpation of a tumour, seated on a large blood-vessel, which the ignorant pretender had mistaken for a cancer; and the epiglottis (a piece of structure projecting from the top of the windpipe‡) has been removed, and the patient been ever after miserable, from being unable to swallow but with the greatest pain and difficulty. Similar instances of enormity daily occur.

For these evils, proper legislation is a complete remedy. In Maryland there are few quacks: They fly from the law. In New-Jersey they are afraid to settle; and the people, since the passage of the act for their relief from this evil, believe them to be impostors, and dangerous.§ In Delaware the effect has been most happy: Dr. Brinkly, an intelligent physician of Wilmington, states, that the quacks take the alarm and fly on the mention of a prosecution. We understand from Dr. Ives, of New-Haven, that the prevention of the power of recovering the amount of their bills, a regulation which has been in force for twenty years, has a salutary effect in Con-

* Tissot, *Avis au Peuple*.

† Ibid.

‡ This essay is intended for general readers.

§ Dr. Haines, of Metford.

necticut. We should think an examination by medical men, properly appointed, and a license given to those found worthy, with proper penalties to prevent its abuse, would root out all the evils of quackery. As this procedure does not render them amenable for past crimes, it could not be considered as an *ex post facto* law. A law has already been enacted incapacitating drunkards from holding property during the continuance of the vice: we hope the same salutary regulation will be extended to the protection of life. The advertisements of quack medicines would properly form a subject of correction. If they were permitted to be published only on condition that the receipt by which they are composed should be published at the same time, they would soon go out of use, and the public be secured against taking dangerous medicines. Bonaparte rid France of this evil, by making quacks deposit their secret in an office provided for the purpose. The parliament of England has paid large sums of money for nostrums at different times. The power of these pretended panacea has vanished after curiosity was satisfied by a knowledge of their component parts; proving that they are impostures on a great scale.

As the example of the legislature of the state of Pennsylvania may have a great effect upon other members of the union, and as almost all the governments of the civilized world have thought proper to restrict the enormity of quackery, it is to be hoped, should the bill again be brought before that respectable body, a second attempt may be more successful, and that the evil may be rooted out from every part of our country.

A medical society has been established at Harrisburg, the capital of the state. In Franklin county another is preparing. The suppression of crime connected with the irregular practice of medicine, will no doubt claim their early attention.

Instructions to the people, where an opportunity offers by the press and verbally, would have a good effect; the abolition of the astrological follies with regard to prescription from the almanacs, particularly the German, would be useful; also the circulation of tracts on the evils of quackery. If these societies could be general in the admission of all the respectable practitioners, printers would be deterred from publishing the advertisements of quacks, in order to avoid becoming criminal in the eyes of the society. Their impious assumption of supernatural power would form a proper subject of animadversion from the pulpit. The physicians should recollect that the quacks try to impose upon the people: First, By striking their senses. In Dauphin county, one of them succeeded by using a black powder; it was proved to be gunpowder, by exploding a small quantity of it: the quack disappeared. Another pretended to cure the tetter, which he said was owing to a worm; an incision was made in the skin, and the worm was produced; this was proved to be a deception, and the quack was disgraced. Secondly, They succeed by familiar and easy manners. It is our duty, as republicans and as men, to treat our patient with kindness, and to assimilate and form our manners as much as possible to their condition: it extends the usefulness of the profession. Thirdly, The attendance of quacks is cheaper. The poor should always be attended without charge. Their favourable opinion will gain the rich.

Mr. Amesbury has improved his apparatus for the treatment of fractures, which have not united, by the addition of pressure made from the sole of the foot upwards, so as to excite inflammation in the cavity of the artificial joint. This is an ingenious and valuable idea.

Several graduates have been rejected by the Naval Medical Committee, at their late examination. This furnishes our schools with new excitement to emulation. In initiating our youth into the elements of medicine, our teachers cannot be too much on the alert.

Dr. Stewart, an intelligent practitioner of this city, in an extensive practice of several years, has never used the forceps. He substitutes his hand, by which he presses, in difficult cases, the bones of the head together, and thus effects delivery, without the slightest injury to the child.

Dr. Emmons, Great Crossings, Kentucky, has used, with great success, tartrite of antimony in colic. He prescribes it with calomel, 15 grs. of the latter to two of the former. The relief he states is immediate, with no bad effects.

We understand that the new operation invented by Dr. Civiale (Paris), for destroying the stone, by grinding it to pieces in the bladder, has not as yet succeeded in this country, though several trials have been made. We intended to have given a drawing of the instrument, and a description of the operation. Though the evidence in its favour is highly respectable, we delay it, till more ample experience decide upon its merits.

We perceive by the last number of Dr. Silliman's valuable Journal, that Professor De Butts of Baltimore has constructed an apparatus, by which the late experiments on the connection of galvanism and magnetism were repeated with effect. As the instrument unites also the advantages of being applied to chemical researches, its value is increased. The experiments promised by that gentleman are expected with interest, as they will no doubt reflect honour on the science of our country, do much good to the establishment of which he is so useful a member,—the University of Maryland, and add much to his well-earned reputation.